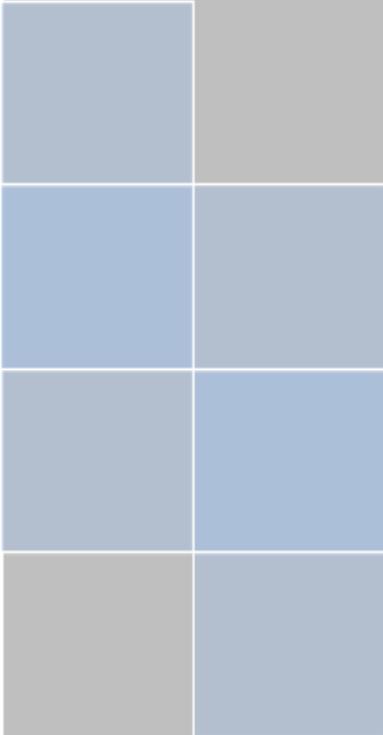


2018
-2021



Bedford Central School District Technology Plan



Bedford Central School District
Technology Committee
June 2018



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District Mission

Our Mission is to cultivate curiosity and a passion for learning by providing challenging educational opportunities for all students so they may achieve their full potential as productive and contributing members of society.

Belief Statement

The Bedford Central School District Technology Committee believes that technology is an integral component of teaching and learning. Teachers and Students should have easy access to appropriate technology to support classroom instruction. Students must be able to seek out readily available technology, when needed, in the course of pursuing learning goals. Technology use in the classroom should support an active learner environment where students engage in creative thinking and collaboration and increasingly assume more responsibility for their learning. Through the use of technology in their learning, students should acquire the technology skills necessary to be successful as they move towards college and career readiness. These skills include, keyboarding, creation of presentations, word processing, creation of multimedia projects, research skills and the organization of digital storage. Along with growing their technology skills, students must also build Digital Citizenship skills to prepare them for connecting and collaborating with individuals beyond the classroom and to help create a positive school culture that supports safe and responsible technology use.

Goals

Goal 1 - Student Digital Proficiency

To have a guaranteed and viable, curriculum-embedded roadmap that students, teachers and leaders follow to inspire innovation, empower student voice, and ensure that learning is a student-driven process.

Rationale

We believe students should learn technology skills within the context of all subject areas and not as an isolated curriculum. With a carefully thought-out road map of design, planning, implementation and review, a curriculum can be made available for students to learn the technology skills that will allow them to fully participate in an economy increasingly based on information skills and products. The district's expectation is that this goal will address the following [ISTE Standards for Students](#):

- 1a.** Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.
- 1c.** Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- 1d.** Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging Technologies
- 3d.** Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.
- 4a.** Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

NYSED goal that best aligns with this goal:

- Develop a strategic vision and goals to support student achievement and engagement through the seamless integration of technology into teaching and learning;

Goal 1 Action Plan

Action Step - Description	Responsible Stakeholder(s)	Anticipated month of completion	Anticipated year of completion	Anticipated Cost
Develop a Scope & Sequence for Keyboarding that is aligned to the keyboarding standards embedded in the NYS Next Generation ELA Standards	Asst. Superintendent for Curriculum & Instruction Technology Committee Curriculum Council	June	2019	N/A
Review the 2017-18 evaluation of the Information & Technology Literacy Curriculum (Phase 1 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2019	N/A
Begin the Research Phase of the Curriculum Cycle to study the development of a K-12 Computer Science Curriculum	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2019	N/A
Provide necessary Professional Development to support the implementation of the keyboarding Scope & Sequence	Asst. Superintendent for Curriculum & Instruction Technology Committee Curriculum Council	June	2020	\$4,500/Annually - Keyboarding Application
Develop updates to the Information & Technology Literacy Curriculum (Phase 2 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2020	N/A
Begin the Development Phase of the Curriculum Cycle to develop K-12 Computer Science Curriculum based on the decisions during the Research Phase	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2020	N/A
Implement changes to the Information & Technology Literacy Curriculum (Phase 3 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2021	N/A
Begin the 3 year implementation process as defined by the BCSD Curriculum Cycle to implement a K-12 Computer Science Curriculum	Asst. Superintendent for Curriculum & Instruction Curriculum Council	June	2021	N/A

Goal 2- Equitable and Accessible Learning Environments

Empower students to build networks and customize their learning environments in ways that support the learning process in an inclusive environment.

Rationale - Equitable and Accessible Learning Environments

Equity of access to information, information skills training and information technology is crucial to both individuals and to our society as a whole. Students who have access to information skills instruction and information technologies will have the skills they need to fully participate in an economy increasingly based on information skills and products. Access to information is the foundation of our democratic processes. Participation in these decision-making processes increasingly relies on having the means and skills to access information.

The Bedford Central School District is committed to providing all students with technology that is accessible and appropriate for each student and his/her learning goals. This is important for all students, and is crucial to the success of those for whom assistive technologies enable access to the curriculum, as well as for those who do not have access to information technologies in their homes.

We believe that increasing equity of access to information, instruction, accessible curriculum and technologies in our schools is a vehicle that will help to overcome all barriers to achievement. It will also assist educators to support every student to both imagine and realize his or her potential. The district's expectation is that this goal will address the following [ISTE Standards for Students](#):

- 1b.** Students build networks and customize their learning environments in ways that support the learning process.
- 6a.** Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
- 7b.** Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.
- 7c.** Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

NYSED goal that best aligns with this goal:

- Provide technology-enhanced, culturally- and linguistically-responsive learning environments to support improved teaching and learning
- Increase equitable access to high-quality digital resources and standards-based, technology-rich learning experiences;

Goal 2 Action Plan

Action Step - Description	Responsible Stakeholder	Anticipated month of completion	Anticipated year of completion	Anticipated Cost
Study the benefit of currently deployed Sound field systems and, if appropriate, develop a plan for increased use of the systems in all classrooms to support UDL	Director of Technology Curriculum Council Assistive Tech Team	June	2019	N/A
Develop a process to collect data on the use of software and online subscriptions.	Director of Technology Technology Committee	June	2019	N/A
Identify the hardware and software in use by other districts in the region compared to BCSD	Director of Technology Technology Committee	June	2019	N/A
Install Sound Field Systems to support UDL, budget permitting	Director of Technology Assistive Tech Team	September	2019	TBD
Implement the developed process for the collection of software and subscription data	Director of Technology Technology Committee	September	2019	TBD
Develop measures to be used to determine the effectiveness of software and subscriptions	Director of Technology Technology Committee	June	2019	N/A
Monitor recommended software and subscription changes for desired use and outcomes.	Director of Technology Curriculum Council Technology Committee	June	2020	N/A

Goal 3- Digital Citizenship

To ensure students, teachers and leaders are equipped with the appropriate knowledge and skills necessary to function safely, morally and ethically within the landscape of information technology.

Rationale- Digital Citizenship

The emergence and use of new technologies strengthen the need for all learners to know and practice safe, effective, ethical use of technology through training in Internet Safety and Digital Citizenship. All learners shall receive guidance in information literacy and the safe and ethical use of tools such as social networking spaces, media tools and other online environments. The district's expectation is that this goal will address the following [ISTE Standards for Students](#):

- 2a. Cultivate and manage their digital identity and reputation and be aware of the permanence of their actions in the digital world.
- 2b. Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- 2c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
- 2d. Manage their personal data to maintain digital privacy and security and be aware of data-collection technology used to track their navigation online.

NYSED goal that best aligns with this goal:

- Develop a strategic vision and goals to support student achievement and engagement through the seamless integration of technology into teaching and learning;
- Provide technology-enhanced, culturally- and linguistically-responsive learning environments to support improved teaching and learning;
- Increase equitable access to high-quality digital resources and standards-based, technology-rich learning experiences;
- Design, implement, and sustain a robust, secure network to ensure sufficient, reliable high-speed connectivity for learners, educators, and leaders; and
- Provide access to relevant and rigorous professional development to ensure educators and leaders are proficient in the integration of learning technologies.

Goal 3 Action Plan

Action Step - Description	Responsible Stakeholder	Anticipated month of completion	Anticipated year of completion	Anticipated Cost
Review the 17-18 evaluation of the Information & Technology Literacy Curriculum (Phase 1 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Library Media Specialists Curriculum Council	June	2019	N/A
Develop updates to the Information & Technology Literacy Curriculum (Phase 2 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Library Media Specialists Curriculum Council	June	2020	N/A
Implement changes to the Information & Technology Literacy Curriculum (Phase 3 of the BCSD Curriculum Cycle)	Asst. Superintendent for Curriculum & Instruction Library Media Specialists Curriculum Council	June	2021	N/A

Goal 4- Devices, Infrastructure and Support

To establish and maintain a technology infrastructure capable of providing access to the appropriate and necessary technology tools to support goals 1, 2 and 3

Rationale - Infrastructure and Support

A well maintained technology infrastructure, with timely upgrades and ongoing monitoring, along with properly trained staff will continue to provide the base necessary for the growth of technology use for administrative and instructional purposes. The district's expectation is that this goal will support the ISTE Essential Conditions developed to support the ISTE Standards above. Specifically addressing the ISTE Essential Conditions for:

(Click the items below for a description of these Essential Conditions)

- [Equitable Access](#)
- [Skilled Personnel](#)
- [Ongoing Professional Development](#)
- [Technical Support](#)

NYSED goal that best aligns with this goal:

- Develop a strategic vision and goals to support student achievement and engagement through the seamless integration of technology into teaching and learning;
- Provide technology-enhanced, culturally- and linguistically-responsive learning environments to support improved teaching and learning;
- Increase equitable access to high-quality digital resources and standards-based, technology-rich learning experiences;
- Design, implement, and sustain a robust, secure network to ensure sufficient, reliable high-speed connectivity for learners, educators, and leaders; and
- Provide access to relevant and rigorous professional development to ensure educators and leaders are proficient in the integration of learning technologies.

Goal 4 Action Plan

Action Step - Description	Responsible Stakeholder:	Anticipated month of completion	Anticipated year of completion	Anticipated Cost
Refresh Devices at MKES, WPES, All Grade 5 Devices & Elem Library Kiosks	Director of Technology	September	2018	\$446,650
Implement FLHS 1:1 starting with Grade 9	Director of Technology	September	2018	\$152,050
Increase availability of Google Expeditions	Director of Technology	September	2018	\$20,000
Add additional Computer Aide for FLHS to support the 1:1 initiative	Human Resources / Technology	September	2018	\$65,000
Refresh Teacher Laptops at FLHS	Director of Technology	September	2019	\$140,000
Refresh Grade 5 & Grade 9 Devices	Director of Technology	September	2019	\$300,000
Refresh HS Content Specific Labs (Windows)	Director of Technology	September	2019	\$45,000
Replace 30 Projectors with Interactive Touch Screen Monitors	Director of Technology	September	2019	\$120,000
Refresh School Computer Labs	Director of Technology	September	2020	\$126,000
Refresh Grade 5 & Grade 9 Devices	Director of Technology	September	2020	\$300,000
Refresh FLHS Mac Labs	Director of Technology	September	2020	\$86,000
Replace 30 Projectors with Interactive Touch Screen Monitors	Director of Technology	September	2020	\$120,000

Alignment with NYSED Initiatives

1. Explain how the district use of instructional technology will serve as a part of comprehensive and sustained effort to support rigorous academic standards attainment and performance improvement for students.

The initiative to develop and maintain Learner Active Technology Infused Classrooms has been ongoing at the Bedford Central School District for over a decade. When fully implemented, a technology infused classroom allows students to: seek out the technology when they need it, in the course of pursuing other learning goals; focus on problem solving activities, setting a context in which to learn lower order skills; have access to differentiated instruction to meet individual needs; work collaboratively, and; understand their role as contributors to a global society.

2. Instruction is differentiated using technology to support the individualized learning needs of Special Education Students in the following ways:
 - All students have access to technology that supports their individual needs (i.e. Touch screen computers, Tablets, etc..) for all domains within their school day (i.e. reading, writing, math, communication).
 - Special Education teachers and students have access to online learning management systems that allow for the creation of assignments that are differentiated to meet the specific student's individualized learning needs.
 - Students have access to robust writing and literacy supports through online applications that can be accessed from any device from school and at home. Supports include Text-to-Speech, Speech-to-Text, Word Prediction, Translation and others.
 - Devices are assigned to students with specific communication needs, including iPads, with various speech generating applications, Tobii Eye Gaze, Logan Proxtalker, and others.
3. The district utilizes technology to address the needs of Students with Disabilities to ensure equitable access to instruction, materials, and assessments in the following ways (Descriptions from the NYSED Technology Survey Tool)
 - ✓ Class lesson plans, materials, and assignment instructions are available to students and families for "anytime, anywhere" access (such as through class website or learning management system).
 - ✓ Technology is used to provide additional ways to access key content, such as providing videos or other visuals to supplement verbal or written instruction or content.
 - ✓ Text to speech and/or speech to text software is utilized to provide increased support for comprehension of written or verbal language.
 - ✓ Assistive technology is utilized
 - ✓ Technology is used to increase options for students to demonstrate knowledge and skill.

- ✓ Learning games and other interactive software are used to supplement instruction.

4. The following professional development will be offered to teachers of Students with Disabilities that will enable them to differentiate learning and to increase their student language and content learning with the use of technology. (Descriptions from the NYSED Technology Survey Tool)

- ✓ Technology to support writers in the elementary classroom
- ✓ Technology to support writers in the secondary classroom
- ✓ Choosing assistive technology for instructional purposes in the special education classroom
- ✓ Using technology to differentiate instruction in the special education classroom
- ✓ Using technology to increase options for students with disabilities to demonstrate their knowledge and skills
- ✓ Multiple ways of assessing student learning through technology
- ✓ Electronic communication and collaboration
- ✓ Integrating technology and curriculum across core content areas

5. The District utilizes technology to address the needs of English Language Learners/Multilingual Learners to ensure equitable access to instruction, materials, and assessments in the following ways: (Descriptions from the NYSED Technology Survey Tool)

- ✓ Technology is used to provide additional ways to access key content, such as providing videos or other visuals to supplement verbal or written instruction or content.
- ✓ Text to speech and/or speech to text software is utilized to provide increased support for comprehension of written or verbal language.
- ✓ Home language dictionaries and translation programs are provided through technology.
- ✓ Technology is used to increase options for students to demonstrate knowledge and skill, such as through the creation of a product or recording of an oral response.
- ✓ Learning games and other interactive software are used to supplement instruction.

6. The district's instructional technology plan addresses the needs of English Language Learners/Multilingual learners to ensure equitable access to instruction, materials, and assessments in multiple languages.

- ✓ In the 5 most spoken languages in the district

7. The following professional development will be offered to teachers of English language learners/multilingual learners that will enable them to differentiate learning and to increase their student language and content learning with the use of technology. (Descriptions from the NYSED Technology Survey Tool)

- ✓ Technology to support writers in the elementary classroom
- ✓ Technology to support writers in the secondary classroom
- ✓ Enhancing children's vocabulary development with technology
- ✓ Writer's workshop in the Bilingual classroom
- ✓ Reading strategies for English Language Learners
- ✓ Integrating technology and curriculum across core content areas

8. The district uses instructional technology to facilitate culturally responsive instruction and learning environments in the follow ways: (Descriptions from the NYSED Technology Survey Tool)

- ✓ The district uses instructional technology to strengthen relationships and connections with families to assist in building a culturally responsive learning environment to enhance student learning.
- ✓ The district uses instructional technology to develop and organize coherent and relevant units, lessons, and learning tasks that build upon students' cultural backgrounds and experiences.
- ✓ The district uses instructional technology to assist in varying teaching approaches to accommodate diverse learning styles and language proficiencies.
- ✓ The district uses instructional technology to facilitate collaborative classroom projects among heterogeneous student groups.

Administrative Management Plan

The staffing of the Technology Department includes:

Name	Title	Assigned Building
David Gee	Director of Technology	Districtwide
Linda Griffee	Senior Office Assistant	Technology Support Center
Scott Fendrich	Database Manager	Districtwide
Christina Gonzalez	Research Assistant	Districtwide
AnneMarie Tinti	Database Specialist	Districtwide
Phil Spagna	Network Administrator	Districtwide
Jason Weiss	Network Specialist	Districtwide
Ty Clarke	Network Specialist	Districtwide
Mike Burke	Network Specialist	Districtwide
Jacques Dugue	Jr. Network Specialist	Elementary Schools
Kevin Hunter	Jr. Network Specialist	Fox Lane Middle School
Shelly Daniele	Computer Aide	Fox Lane Middle School
Greg Connor	Computer Aide	Fox Lane High School
TBD	Computer Aide	Fox Lane High School
Bob Alspach	Computer Aide	Bedford Hills Elementary
Daniel Barnes	Computer Aide	Bedford Village Elementary
Gina Gencarelli	Computer Aide	Mount Kisco Elementary
Steven Samaha	Computer Aide	Pound Ridge Elementary
Donna Baulkwill	Computer Aide	West Patent Elementary

Investment Plan

Investment Plan

Provide a three-year investment plan to support the vision and goals.

Anticipated Item or Service	Estimated Cost	Is Cost One-time, Annual, or Both?	Potential Funding Source(s)
End User Computing Devices	\$700,000	Annual	District Operating Budget
Internet Connectivity	\$11,500	Annual	District Operating Budget E-Rate
Staffing	\$1,350,000	Annual	District Operating Budget
Professional Development	\$25,000	Annual	BOCES Co-Ser Purchase
Instructional and Administrative Software	\$335,000	Annual	BOCES Co-Ser Purchase District Operating Budget

Planning Process and Evaluation

The Technology Committee acknowledges that this is a living plan that requires an ongoing process of assessment, evaluation and course corrections to adapt to the changing circumstances and educational requirements of the Bedford Central School District, as well as to take advantage of new and emerging technologies that will enhance the delivery of instruction and efficiency of the district. This assessment and evaluation will be conducted in various ways based on the item being evaluated. The following groups will meet throughout the year to evaluate and update technology plans as necessary.

- District Technology Committee – 8 times a year
- School Based Technology Teams – 4 times a year

Examples of assessments and evaluation methods include:

- Research based surveys of students and teachers
- Presentations from teachers using emerging technology in their classrooms
- Evaluate Technology Department Help Desk data
- Discussions and feedback from the Curriculum Council, Staff Development Policy Board and other district committees

School Technology Team Process

Building Technology Teams are charged with representing the needs and advocating for the use of technology in their building. This will be accomplished through soliciting needs and suggestions and measuring everything against the District Technology Plan, Curriculum Goals and State & ISTE Technology Standards in addition to recommending purchases, subscriptions and professional development. Consideration will also be given to the efficiency and financial need to standardize equipment and resources where possible and the ability of the District to sustain long term support.

At least one member of the building Technology Team should serve on the District Technology Committee to represent and report on building activities and needs and convey information back to the building team.

Team membership should include the building computer staff, Principal or designee and staff that will provide representation for the building. The Director of Technology will provide team guidance and act as a resource, as well as serve as a liaison between the District Technology Committee and the building team.

Every year by the end of January each building Technology Team will provide the information below to the Director of Technology, as well as any other items the building wishes to have considered for the following school year. The Director of Technology will bring a completed summary of all buildings to the Technology Committee for consensus on items to be included in the budget planning for the following school year.

Annually for all buildings:

- Detailed list of requested peripherals for budget consideration
- Highlight technology "Best Practices" and innovation currently in use
- Identified Professional Development needs
- Specific technology "trailblazing" and pilot programs to be considered that will help accomplish standards and goals
- Recommended Technology Plan updates

In a year prior to a hardware refresh (every 4 years) buildings will:

- Evaluate current distribution of Technology Hardware
 - Is equipment being efficiently utilized in current locations?
 - Are there areas that frequently have hardware "shortages"?
- Recommend distribution and availability plan based on budget available
 - What is the desired student to computer ratio?
 - Based on evaluation is there current hardware that should be moved?
- Any new programs or initiatives that need additional or specific hardware?

Key Stakeholders

Members of the Technology Committee charged with developing, updating and managing the implementation of this plan:

- Mr. David Gee - Director of Technology (Chair)
- Dr. Joel Adelberg - Assistant Superintendent for Curriculum & Instruction
- Ms. Judith Aragon - ESOL Teacher, Elementary
- Ms. Margaret Browning-Barnickel - Assistive Technology / Occupational Therapist
- Dr. Edward Escobar - Director of Pupil Personnel Services
- Mr. James Fenimore - Parent
- Theodore Grossberndt - Student, FLHS
- Ms. Pam Harney - Board of Education Liaison
- Ms. Stacey Haynsworth - Director of Human Resources & Development
- Mr. Colin Heilman - Parent
- Dr. Brett Miller - Principal, Fox Lane High School
- Ms. Debra Myers - Teacher, PRES
- Ms. Stephanie Peborde-Burke, Science Research Teacher, FLHS
- Alejandra Perea - Student, FLHS
- Mr. Edward Reder - Board of Education Liaison
- Ms. Erica Rogan - Assistive Technology / Speech & Language
- Ms. Michele Scarpelli-Nigro - Teacher, BHES
- Jamie Scott - Student, FLHS
- Ms. Gina Smith - Principal, Bedford Village Elementary School
- Ms. Dorothy Venditto - Tiered Support Teacher, WPES
- Ms. Corinne Videla - Learning Specialist, WPES