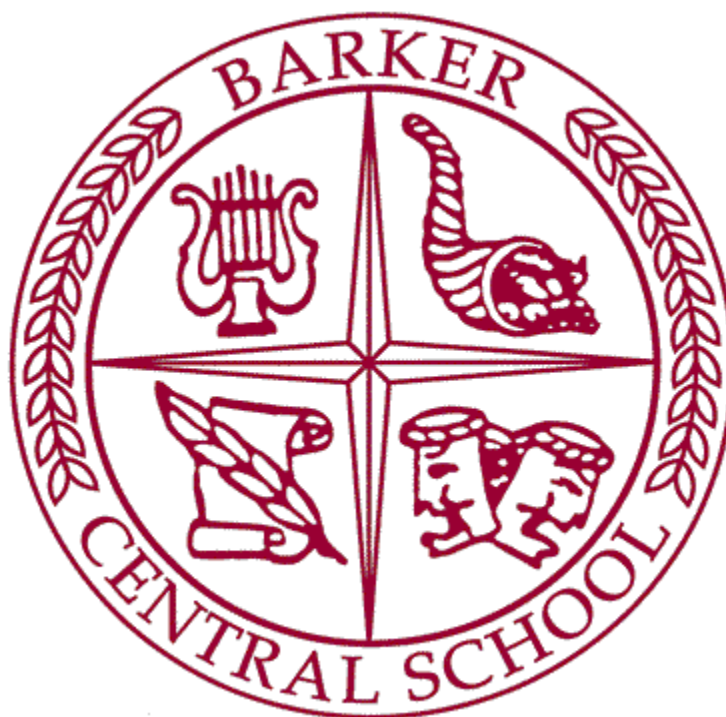


*Barker Central School District  
1628 Quaker Road  
Barker, New York 14012  
716.795.3832*

*Comprehensive Instructional Technology Plan*



*Barker's Vision for the Future  
July 2018 - June 2021*

<http://www.barkercsd.net/techplan>

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## **INTRODUCTION**

The Barker Central School District Comprehensive Instructional Technology Plan is a three-year blueprint that spans July 1, 2018 through June 30, 2021. This plan creates the cohesive vision that all stakeholders can reference to implement technology tools to meet the needs of diverse learners in our schools. The Comprehensive Instructional Technology Plan is designed to support the District's mission to provide educational programs which enable all students to function effectively and responsibly in an ever-changing world. The Instructional Technology Committee, comprised of volunteers representing the school district and community, developed this plan to reflect a shared vision of the school community stakeholders and the equitable impact of instructional technology on teaching and learning. The Instructional Technology Committee developed a realistic timeline for the development of this plan, determined the purpose and scope of sub-committees, developed for format for the plan, researched standards, reviewed current practices, solicited feedback from building/department level teams, and initiated data collection methods to gather insights from stakeholder groups. We believe that technology can transform learning experiences when integrated into curriculum purposefully and intentionally. We understand that technology is continuously evolving causing shifts in teaching and learning. Precise planning, implementation and support can prepare students, teachers and school leaders with the tools and skills to inspire, ignite and leverage technology to positively impact achievement.

The Barker Central School District is a public school system located in an agricultural area along Lake Ontario in the Village of Barker and the Town of Somerset in the northeastern part of Niagara County. The district serves approximately 800 students, Pre-K through grade 12 with a certified professional staff. The district contains two schools, Pratt Elementary and Barker Junior/Senior High in buildings that are interconnected on one campus. The parent body is composed of college educated professionals, agricultural, skilled and semi-skilled industrial workers. Barker Central School is accredited by the Board of Regents of the New York State Department of Education. Appreciation is expressed to the Board of Education, teachers, staff, students and community members for their support of instructional technology at Barker Central School and the committee volunteers for their continued dedication.

## **BARKER CENTRAL SCHOOL DISTRICT VISION**

Barker Central School will provide the experiences necessary for our students to acquire the knowledge, skills, and traits to succeed intellectually, physically, socially, and emotionally in an ever-changing world.

### **INSTRUCTIONAL TECHNOLOGY COMMITTEE MEMBERS**

Dr. Roger J. Klatt Superintendent of Schools	Mr. John Hoar Pratt Elementary School Principal
Mr. Randall Atwater Board of Education	Mr. Andrew Jenks Student
Mr. William Bodine Community Member	Mrs. Sharon Lamb Barker Junior/Senior High Teacher
Mr. James Cantella Barker Junior/Senior High Teacher	Mr. James Luckman Director of Technology
Mr. Michael Carter Barker Junior/Senior High Principal	Mrs. Tracey Luckman Pratt Elementary School Teacher
Mrs. Kathryn Class Parent	Mrs. Loriann Martell Barker Junior/Senior High Teacher
Mrs. Mary Jo Clemens-Harris Board of Education	Mr. Mark McKee Community Member
Mr. Jeffrey Costello District Technology	Mr. Louis Mead Board of Education
Mrs. Mary Dudek Barker Junior/Senior High Teacher	Mrs. Leslie MocarSKI Pratt Elementary School Teacher
Mrs. Heather Ecker Board of Education	Mrs. Janet Morrow Barker School Librarian
Mrs. Deborah Farese Director of Instructional Services	Miss Emily Oliveira Student
Mrs. Candice Gancasz Board of Education	Mrs. Janice Stoll District Business Office
Mrs. Erin Goodlander Pratt Elementary School Teacher	Mr. John Sweeney Jr. Board of Education
Mr. Connor Grissett Student	Mrs. Sara Thibault Pratt Elementary School Teacher
Miss Genevieve Harris Student	Mrs. Lisa Thompson Barker Public Library Director
Mrs. Carol Heiligenthaler District Business Administrator	Mrs. Virginia Voss Board of Education

## **TECHNOLOGY MISSION STATEMENT**

To provide a safe, equitable, innovative, rigorous and engaging learning environment to promote academic excellence through strategic implementation of technology resources and partnerships to prepare students to succeed in a globally connected and sophisticated digital society.

## **TECHNOLOGY VISION STATEMENT**

To develop an equitable, innovative, rigorous and engaging instructional technology program for leadership, teaching and learning in alignment with state and local standards through strategic planning, implementation and evaluation.

- The District leadership team will support staff and students by providing technology resources and professional development to foster a school community of communicators, explorers, implementers and problem solvers.
- Teachers and staff will embrace technology resources and tools to provide students with active learning experiences and opportunities to prepare them to extend their personal abilities in a globally connected society.
- Students will develop proficiency to transparently use technology in practical ways to develop communication and collaboration skills, develop problem solving techniques, promote creativity and encourage critical thinking while becoming self-directed learners.
- Parents will use technology to actively connect to learning activities, establish partnerships with leadership and instructional staff to support educational objectives and develop confidence with communication systems to remain informed and engaged.

## **DISTRICT TECHNOLOGY GOALS**

The Barker Central School District recognizes how educational technology resources can transform teaching and learning when implemented through thoughtful planning, consideration and research. The following goals have been established to target four main areas: Learning, Teaching, Leadership and Infrastructure.

- I. **LEARNING:** Design active learning spaces to accommodate all learners and provide experiences that will facilitate and extend personalized learning opportunities, abilities and productivity in our globally connected society.
- II. **TEACHING:** Educators will receive support to effectively integrate technology into established content curriculum to reach the needs of all learners.
- III. **LEADERSHIP:** School leaders at all levels will develop proficiency with technology resources and integration strategies to define the vision for use of technology in teaching and learning.
- IV. **INFRASTRUCTURE:** All stakeholders will have access to reliable and sustainable technology resources that provide anytime, anywhere access to facilitate teaching and learning goals.

## ACTION PLAN

Technology changes over the past decade has transformed some of the ways we teach and learn in our schools, but we realize there is work to be done to prepare, improve and implement. The Action Plan identifies appropriate steps to support the attainment of the goals and includes stakeholder responsibility and a targeted timeline for completion. Subsequent sections contain expanded information on plans for one-to-one device implementations; improved and expanded professional development for administrators, teachers and support staff; increased focus on technology literacy and digital citizenship; and sustainability for all resources and infrastructure. The plan is tied to the Barker Central School District strategic plan and goals. This plan is meant to encourage and inspire you to think about the ways you may be able to improve teaching and learning through exploration, experimentation and implementation of technology resources.

<b>LEARNING</b>			
Goal I. Design active learning spaces to accommodate all learners and provide experiences that will facilitate and extend personalized learning opportunities, abilities and productivity in our globally connected society.			
<b>Action Step</b>	<b>Action Step Description</b>	<b>Responsible Stakeholder</b>	<b>Date each action will be completed</b>
Curriculum	Improve achievement for all students through an articulated and challenging curriculum that is aligned with standards.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> </ul>	2018-2021
Research	Provide effective, research-based instruction to all students.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Instructional Staff</li> </ul>	2018-2021
Learning Spaces	Design blended learning spaces and opportunities to create personalized learning experiences for all students.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> <li>• Instructional Technology Committee</li> </ul>	Fall 2018
Implementation	Provide assistive technology and specialized tools and applications to meet the needs of diverse learners.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> </ul>	2018-2021
Cybersecurity	Infuse digital citizenship concepts, skills and resources into curriculum for all students.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> </ul>	2018-2021
Community	Provide access to resources, training and information to parents and community.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> </ul>	2018-2021
Collaboration	Redesign physical learning spaces to accommodate STEM/STEAM, Maker Education, Gamification, Robotics and Virtual Reality initiatives.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> <li>• Instructional Technology Committee</li> </ul>	Spring 2019
Purchasing	Acquire technology resources, tools, devices, systems and solutions to align with instructional plans, goals and technology standards.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Staff</li> <li>• Instructional Technology Committee</li> </ul>	2018-2021

### **Technology and Learning**

Critical thinking skills, complex problem solving aptitudes and the ability to collaborate are essential elements for students in our competitive, global and connected world. Learners must claim ownership of the opportunity to acquire new information and make meaningful choices about their own learning.

Technology offers new ways curriculum is delivered to students and access to content and learning from digital devices has become almost limitless. As this accessibility increases, the curriculum delivery and acquisition method must also evolve.

### **Assistive Technology**

Technology tools designed for specific purposes can transform the world of education for students with disabilities. These technology tools are designed to improve the functional capabilities of a child with a disability. The use of assistive technology is evolving and providing students with a customized learning experience in our schools. Alternative input devices, speech-to-text options, sensory enhancers, screen readers and language acquisition assistance systems have changed attitudes about learning for students. Improved academic experiences due to the inclusion and availability of assistive tools builds confidence, motivation and self-esteem.

### **Blended Learning**

As personalized learning increases, it allows opportunity for blended learning. Blended learning augments the ability for students to regulate their pace, route and other learning variables. Schoology and Google Classroom are District supported learning management systems or “digital classrooms” allowing blended learning opportunity for students to make learning more personalized, applicable and appealing.

### **Culturally Responsive Teaching**

The equity of educational opportunity and culturally responsive practices can be achieved through the use of technology resources. Social media, collaboration systems, online communication portals and digital classroom solutions provide teachers with tools to implement culturally responsive activities in the classroom. Technology is provided to support implementation of professional learning communities, infusion of tradition, culture and language and collaborative partnerships that promote cultural responsiveness.

### **Differentiation**

A major benefit of using instructional technology resources in the classroom is the ability to differentiate instruction to meet the needs of every student. Students grow and develop at different rates and they learn in different ways and speeds. Technology resources make it possible to pace lessons appropriately for each student’s learning level and can be used to promote learning in the multiple intelligences.

Instructional strategies are customized for various types of learners including: verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical/rhythmic, interpersonal, intrapersonal and naturalist learners. When selecting technology that promotes differentiated instruction for all students, teachers will determine how standards are correlated, availability of formative assessments and options of different skill levels on the same content. Students can form in groups based on skills, interests, readiness or by choice and there is purposeful use of flexible grouping with the goals of the lesson in focus while holding students to high standards.

### **Digital Citizenship**

Acquisition of digital citizenship skills and safe practices in the use of technology is essential to the safety and success of all students. Our District adopted Easy Tech’s Learning.com system to provide teachers and students with resources to acquire skills for safe online activity and how to use technology in a safe, productive, respectful and meaningful manner in and out of school. The implementation of a systematic plan to educate all stakeholders about digital citizenship, intellectual property rights, resource and information validity and personal safety is a critical priority. The District shares resources with parents and community about digital citizenship to strive toward common expectations and language at home and in school.

### **English-Language Learners (ELL) & Multilingual Learners**

Technology offers innovative ways to optimize instruction to address the needs of students who are learning English. Activating prior knowledge using a personalized learning approach for ELL students is a strategy where digital resources and multimedia impact achievement. Technology resources paired with an authentic learning environment in a social context can offer great engagement, interaction and production. Provisions for individually determined technology needs are made for all ELL and multilingual students. The District provide equitable accommodations for ELL students by implementing quality instructional practices and technology resources including different device interfaces, use of digital apps and dictionaries and extra time with technology resources.

### **Learning Spaces & Collaboration**

Technology and the opportunities it makes for teaching and learning encourage the re-thinking of the physical organization of learning spaces. Configuration of classrooms should facilitate learners moving around the classroom to collaborate and be flexible with mobile learning devices. Learning spaces should allow whole class, group and one-on-one instructional space to meet the needs of the learner. Teachers will be better able to use resources to create learning experiences that prepare students to extend personal abilities and productivity.

### **Personalized Learning**

As technology changes and becomes more accessible, learning becomes more personalized. Digital fieldtrips, live video streaming, social media and immediate digital broadcasting can make learning applicable, meaningful and engaging. Instruction becomes more focused on the individual needs of the learner and promotes varied pace for learning and instructional support. Learning objectives, instruction and content varies based on the individual needs of the learners.

### **STEM/STEAM, Maker Education, Gamification, Robotics & Virtual Reality**

The integration of personal learning experiences and team-based projects can be achieved through many project based initiatives and specialized technology tools infused with cross curricular integration projects. Science, Technology, Engineering and Math (STEM) and the blending of Arts, Design and the Humanities (STEAM) designed with technology tools create cross-disciplinary activities, experiences and approaches to integrated studies. The provision for space and resources to implement Maker Education opportunities, Gamification integration, Robotics and Virtual Reality systems compliment and expand potential for teaching and learning. Our District is developing these programs and including access to exposure to these opportunities for all students through enrichment classes and working to integrating these initiatives transparently into daily lesson planning, design and development.

### **Technology Literacy, 21<sup>st</sup> Century Learning, P21 & Student Achievement**

Our district will use an online digital literacy system called Easy Tech-Learning.com to integrate standardized lessons to achieve targeted proficiency by grade level. Teachers at the elementary level in grades Pre-Kindergarten through 6 will use small or large group instruction to complete lessons and the online progress monitoring functions to measure proficiency. Grade 5 and 6 students will receive formalized instruction in a mobile and/or desktop lab environment taught by business/computer skills teachers. Junior high students in grades 7 and 8 will receive small and large group instruction, independent practice and individual and group projects. High school students in grades 9-12 will receive technology instruction through core and special area technology infused curriculum courses. High school students have the opportunity to become MOUS (Microsoft Office User Specialist) certified and to pursue advanced technology course electives. All teachers receive training on the development of instructional lessons that incorporate technology skills and technology integration strategies appropriate to grade level and/or content area. Plans for one-to-one device access, high-speed access to content, high levels of interactivity, content production through curriculum integration measures and blended learning environments will positively impact student achievement and transfer of knowledge and skills.

### **ISTE Standards for Students**

The ISTE Standards for Students will be used to guide instruction, technology integration and technology literacy for all students. These standards are categorized under seven classifications:

<b>Empowered Learner</b>	<b>Digital Citizen</b>	<b>Knowledge Constructor</b>
<b>Innovative Designer</b>	<b>Computational Thinker</b>	<b>Creative Communicator</b>
		<b>Global Collaborator</b>



<b>TEACHING</b>			
Goal II. Educators will receive support to effectively integrate technology into established content curriculum to reach the needs of all learners.			
<b>Action Step</b>	<b>Action Step Description</b>	<b>Responsible Stakeholder</b>	<b>Date each action will be completed</b>
Professional Development	Provide coordinated, focused and embedded professional development.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• Building Administrators</li> <li>• CSLO E1B Trainers</li> <li>• Professional Trainers</li> <li>• ON BOCES Trainers</li> </ul>	2018-2021
Budgeting	Budget for professional development online systems to deliver “just in time” training and other professional development services.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• Business Administrator</li> <li>• Building Administrators</li> </ul>	2018-2021
Communication	Facilitate and model integration strategies for instructional technologies in all learning environments.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• CSLO E1B Trainers</li> <li>• Professional Trainers</li> <li>• ON BOCES Trainers</li> </ul>	Fall 2018 2018-2021
Collaboration	Provide common times for teachers to design lessons, practice strategies and explore technology systems, tools and resources.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> </ul>	Fall 2018 2018-2021
Evaluation	Expect high performance and accountability for staff.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> <li>• Director of Technology</li> </ul>	2018-2021

### **Curriculum & Technology**

Technology is a tool to help students achieve the goals set forth in the ISTE National Educational Technology Standards (NETS), Learning Standards of New York State and the New York State P-12 Common Core Learning Standards. When used appropriately in the classroom, technology engages students in active learning and assists teachers as facilitators in a learning environment. Teachers must address different learning modalities and diverse populations in a classroom setting. Technology supports this effort as a learning tool that can deliver content through a variety of methods. In addition, technology can be a vehicle for restructuring the learning environment and methods in which teachers deliver instruction, enhancing student learning and demonstrating the relevance of curriculum across all content areas. The ISTE NETS framework will guide instructional staff in the development of curriculum and technology integration.

### **Rigorous Academic Standards Attainment & College/Career Readiness**

Instructional technology resources directly correlate to increasing rigor in the classroom. Technology that increases rigor promotes higher order thinking skills by requiring students to analyze, reflect, synthesize information and create solutions. In a rigorous classroom, expectations are high and technology enhances the level of assignments and activities transforming student work and learning. Students can apply knowledge through use of technology resources by creating, producing and project-based learning. Technology increases rigor through multiple step processes, generation of information, translation, analyzation and application. Personalized learning for students allows the development of learning in different ways. The development of soft skills has become critical for college and career preparation. Technology resources are used to develop critical thinking skills, problem solving abilities, collaborations, adaptability, initiative, entrepreneurialism, communication skills, information analysis, curiosity and imagination. Technology resources made available for teachers and students must be aligned with standards and with the strategic plan for performance improvement.

### **Professional Development**

An essential element in the successful implementation of any program is professional development. Technology is changing the daily operations of the educational institution, as well as the expectations for teaching and administrative staff. Professional development programs need to focus on skills-based training and on the effective use and integration of technology in the instructional and administrative setting. This component of professional development is ongoing, as new technologies continue to emerge. The use of technology to assist in meeting the New York Common Core Standards is critical. An awareness of state and national standards addressing technology competencies for teachers, administrators and other relevant educators are conveyed through professional development workshops. The district has adopted the ISTE National Educational Standards for Teachers and Administrators. Professional development opportunities are provided to assist with all facets of lesson development, technology integration, planning and other instructional and management activities for teachers and administrators. A significant and integral factor of an overall education process is the continuous learning for instructional staff. Given the complexities of change and specifically, the implementation of the Learning Standards of New York State, New York State P-12 Common Core Learning Standards and ISTE National Educational Technology Standards for students, teachers and administrators, professional development is essential. A working knowledge of these standards is vital to understanding and applying curricular goals and objectives, instructional practices needed to implement goals and objectives and appropriate assessment practices needed to evaluate goals and objectives. The professional development plan is driven by the concept that instructional staff will need to continue their efforts to enhance curriculum application and assessment in order for students to meet and exceed appropriate standards. Finally, it is recognized that a successful professional development process must emphasize context, process and content. It must be a sustained endeavor to provide staff with the tools and critical substance to observe, reflect and modify practice of action research principles.

### **ISTE Standards for Teachers**

The ISTE Standards for Teachers are categorized under seven classifications:

**Learner, Leader, Citizen, Collaborator, Designer, Facilitator, Analyst**

**SAMR Model for Technology Integration**

The SAMR Model for Technology Integration redefines lessons and activities allowing students the opportunity to take ownership of their learning and prove their understanding of the content. The SAMR Model will be integrated into professional development workshops for teachers and be used to enhance and transform instructional strategies.

**S – SUBSTITUTION:** Technology acts as a direct tool substitute, with no functional change.

**A – AUGMENTATION:** Technology acts as a direct tool substitute, with functional improvement.

**M – MODIFICATION:** Technology allows for significant task redesign.

**R – REDEFINITION:** Technology allows for the creation of new tasks, previously inconceivable.

<b>LEADERSHIP</b>			
Goal III. School leaders at all levels will develop proficiency with technology resources and integration strategies to define the vision for use of technology in teaching and learning.			
<b>Action Step</b>	<b>Action Step Description</b>	<b>Responsible Stakeholder</b>	<b>Date each action will be completed</b>
Professional Development	Provide coordinated, focused and embedded professional development.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• CSLO E1B Trainers</li> <li>• ON BOCES Trainers</li> <li>• Professional Trainers</li> </ul>	Fall 2018 2018-2021
Planning	Construct a shared vision for technology enhanced learning.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> <li>• Director of Technology</li> </ul>	Fall 2018 2018-2021
Budget	Examine existing budgets and allocate funding to support teaching and learning initiatives.	<ul style="list-style-type: none"> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> </ul>	November 2018 Annually
Partnerships	Foster the development of teacher networking opportunities, mentor trainers and external contacts and industry resources.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> <li>• Director of Technology</li> </ul>	Fall 2018 2018-2021
Evaluation	Develop and implement assessment measurements for classroom technology use and associated instructional strategies.	<ul style="list-style-type: none"> <li>• Building Administrators</li> <li>• Director of Instructional Services</li> <li>• Director of Technology</li> <li>• Instructional Technology Committee</li> </ul>	Summer 2018 Annually

**Shared Vision**

Leaders will be required to acquire specific skills and knowledge to facilitate and assess transformative, technology enhancing learning in classrooms. District and building leaders must work collaboratively to build a shared vision for technology and create the culture where new instructional approaches and strategies are celebrated. Leaders must model experimentation and risk-taking skills to demonstrate the benefits to reach success for technology enhanced learning experiences.

**Professional Development**

Leaders must provide ongoing, applicable professional learning opportunities for all staff. Leaders must participate and model this professional learning with staff to demonstrate commitment and understanding to accurately develop assessment measures and support the teaching and learning process.

**ISTE Standards for Administrators**

The ISTE Standards for Administrators are categorized under five classifications:

- Visionary Leadership**
- Digital Age Learning Culture**
- Excellence in Professional Practice**
- Systemic Improvement**
- Digital Citizenship**

<b>INFRASTRUCTURE</b>			
Goal IV. All stakeholders will have access to reliable and sustainable technology resources that provide anytime, anywhere access to facilitate teaching and learning goals.			
<b>Action Step</b>	<b>Action Step Description</b>	<b>Responsible Stakeholder</b>	<b>Date each action will be completed</b>
Policy/Protocols	Standardize and prioritize the use of District resources.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Technology Committee</li> </ul>	Summer 2018 2018-2021
Sustainability	Develop systematic and sustainable plans for maintenance and replacement cycles for facilities, equipment, instructional materials and other key District assets.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Technology Committee</li> </ul>	Fall 2018 Semi-Annual
Implementation	Provide ubiquitous access to technology resources for all teaching and learning stakeholders.	<ul style="list-style-type: none"> <li>• Director of Technology</li> </ul>	Summer 2018 2018-2021
Implementation	Implement data privacy, security and recovery solutions and develop a disaster recovery plan.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Director of Instructional Services</li> <li>• Business Administrator</li> <li>• Building Administrators</li> <li>• Instructional Technology Committee</li> </ul>	Summer 2018 Annual
Implementation	Implement district energy management solution and reduce consumption of natural resources.	<ul style="list-style-type: none"> <li>• Director of Technology</li> <li>• Business Administrator</li> </ul>	Summer 2018 Semi-Annual

Barker Central Schools strives to provide students with the knowledge and skills needed to be contributing members of society. Barker Central Schools is committed to providing staff and students with the equipment, hardware and software necessary to enhance the learning environment and student achievement. Supporting engaging, transformative, technology enhanced learning requires ubiquitous access for all learners to produce, compose and analyze new artifacts of learning.

### **Technology Delivery**

The Barker Central School District employs a variety of methods to deliver technology to provide learning opportunities beyond the school walls and continually explores innovative ways to deliver and receive educational material for our staff and students.

- Online learning partnerships with universities have been established and will be expanded to provide college level coursework in a blended learning environment.
- Cloud based services, Google Education, Microsoft Office 365 and Schoology have been integrated to offer anytime, anywhere file access, online applications and licensed downloads to staff and students.
- Web-based digital instructional video content and Virtual Field Trips (VFTs) will be used to enhance curriculum at all grade levels. These services will be made available as part of a subscription and through the O/N BOCES VFT COSER.
- Video conferencing programs like Google Hangout and Skype will be used in conjunction with web cameras equipped with audio capability for the delivery of specialized connections to enhance instruction and join students with external instructional resources and experiences.
- Safari Montage will be connected with interactive panels in classrooms and interfaced with devices to deliver instructional digital resources, professional development and external instructional resources.
- Robotic devices have been acquired to provide live video connectivity for homebound students.
- Wireless access for busses will be investigated to provide connectivity for personal and/or district devices to facilitate completion of student work and possible video transmission for approved school events.
- Web-based resources for staff and students including instructional, remedial, reinforcement, exploratory, credit-recovery and digital coursework will be evaluated and implemented.

### **Access**

The Barker Central School District is a community-based learning center. Technology provides new ways of communicating ideas and information. Barker Central Schools is dedicated to exploring new methods of communication via our website, voicemail, e-mail, web e-alerts, text capabilities, mobile learning devices and Black Board Connect emergency notification system. These methods will allow community members, parents and students to access live data regarding district events, student achievement, school activities, scheduling and course information, college and financial information and will provide a means for communicating with teachers, administrators and staff. The Barker Central School District will take steps to ensure that all students and teachers have increased access to technology by expanding community education classes for young children through adult level learners and offering a more extensive range of professional development opportunities. Our commitment to various BOCES services such as Common Set of Learning Objectives provides our staff with the opportunity to take advantage of progressive staff development courses to enhance the integration of technology into instruction and curriculum. The acquisition of interactive classroom equipment will also provide students with greater access to the exploration of technology tools as a learning mechanism. As the district strives to provide a one-to-one computing model for students with secure wireless and mobile computing devices, greater access will be realized by all students. The acquisition of mobile devices with a specific purpose, such as speech to text applications, to meet IEP goals will provide assistive technology for special-needs students. The district migration from a server-client based student management system to a web-based system with an integrated parent portal provides parents with greater access to student information and communication with instructional staff.

### **Parental Communications & Community Relations**

The Barker Central School District website offers staff, students and community members the ability to remain current with instructional, activity and other school information posted on a continuous and time appropriate schedule.

- The Instructional Technology Plan will be disseminated to community members in digital format via the district website and paper copies will be made available in the district office for residents that cannot access the document on the Internet.
- Community education course and registration information will be made available on the district website and in print format available at the district office. Technology related courses will be offered to continue the technology literacy initiative for community members as part of the Barker Community Education program.
- Classroom web-pages on the district website will be used to effectively communicate with parents and promote parent involvement in school related activities.
- High school study plans will be uploaded to the website at the beginning of each quarter to provide curricular information for each course.
- Blackboard Connect rapid broadcast system will keep community members, parents & students informed about school events, student absences and emergency information.
- District calendar and school “Banner” publication will be updated on the district website.
- Student Management System software, PowerSchool’s Parent Portal, will provide secure parental and student access to student information.
- Internet safety and other technology related informational sessions and web resources will be offered to parents and community members each year.
- The local PTO, Instructional Technology Committee, NAF (National Academy Foundation) will include parents and community members as active participants in the planning, development, implementation and assessment of the instructional technology plan.
- Board of Education meeting agendas and minutes and other important notices will be provided and updated on the website.
- The website school district calendar will be updated to provide optional e-alert notifications and event information throughout the year.
- A Barker Central School District Alumni Association website section will maintained by alumni officers to disseminate information to former students and graduates.

### **Supporting Resources**

A variety of resources are revised annually and utilized to support the entire technology program: District Policies (Student use of Computerized Information Resources Acceptable Use Policy, Staff use of Computerized Resources, Children’s Internet Protection Act: Internet Control/Filtering/Safety Policy, Electronic manuals and printed material, Informational School Web Site (Intranet), Instructional/Training Software & Resources, Technology Department Procedures, Electronic Information Subscriptions/Help Systems, Mobile Device Program Loan and Authorization Agreement Documentation, Office 365 Parental Permission Forms, One to One Computing Initiative Forms, Higher Education Partnership Informational Forms and Procedures (Advanced Placement & National Academy Foundation), Instructional Technology Committee, Classroom Webpage Design Guidelines, Web Accessibility Guidelines, Erie 1 BOCES Technical & Instructional Support and other resources are utilized to support the entire technology program.

## STATE OF THE DISTRICT

### **Hardware/Software/Network Infrastructure, Telecommunications Status/Inventory**

**Network Servers/Wire Closets:** The Barker Central School District is equipped with Windows based and virtual servers that operate on Ethernet based architecture. A centralized file server room is located in the high school that connects wire closets throughout the district via 62.5/125 multimode fiber.

**Broadband WAN:** The district is connected to Erie 1 BOCES Gigabit Broadband Wide Area Network services via the Shared Telecom Broadband Service.

**Classroom Computers/Devices:** The Barker Central School District computers function in a Microsoft Windows Active Directory environment, Google G-Suite and Neverware and respond to policies to facilitate desktop management, application deployment, network security and power management.

**Administrative Offices:** The central offices utilize Windows 10 to access secure online services from Erie 1 BOCES to provide functions for financial management services, personnel management and other electronic communications.

**Specialized Software Systems:** PowerSchool is used to manage student attendance, grades, transcripts and demographic data. The WebSmartt Cafeteria Management system utilizes registers equipped with biometric devices in the high school to facilitate accurate and rapid meal transactions. IEPDirect and RTIMDirect are web based systems used to track individual plans for students with specialized instructional or program needs. Web based data systems are acquired through Erie 1 BOCES to provide the district with analysis and error checking systems to report accurate data to meet state reporting requirements. Microsoft Outlook is used to provide electronic mail and calendar functions for staff. The Lightspeed System provides Internet Content Filtering for all static and mobile machines and devices.

**Audio/Visual:** The district is in process of migrating to an interactive classroom solution to interface with the Safari Montage digital resource system to provide access to instructional and informational video, audio and image resources. A fully functional television studio is located in the high school to provide students with opportunities to learn all facets of broadcasting through the development and delivery of live announcements.

**Computer Labs:** The district has computer labs available for whole class instruction, independent student work, staff development, community education and after-school programs.

**Mobile Carts/Devices:** Mobile carts with full access to file/print/cloud and Internet services are available for instructional use. Mobile computing devices are assigned on an annual basis to select groups of students to target specific curricular development, learning initiatives and experiences and align with standards.

**Classrooms:** Classrooms are equipped with networked student computer stations and designated teacher stations, mobile devices, printer and document camera. Peripheral devices are designated to teachers, students and classrooms upon approved request

**Parent Connection:** Blackboard Connect is a broadcast system providing daily outbound messages to parents when students are absent or the district sends voice notification to students/parents/community. PowerSchool's Parent Portal provides real time access to student grade, attendance and demographic information.

### **Interoperability of Equipment**

The Barker Central School District operates a Windows based, virtual desktop/server and cloud based, mobile device environment. Equipment purchase requests are only finalized when research by technology department staff determine successful interoperability with existing systems and infrastructure. Purchases made through Erie 1 BOCES are approved by the Senior Technical Support Specialist assigned to the district. This process serves as a second check for interoperability with the WAN, BOCES systems and internal LAN. Continuous upgrading of equipment compatible with the district's computer network is realized from the district hardware budget.

**Technology Sustainability, Replacement and Maintenance Cycle**

Technology devices will be identified for replacement on a semi-annual basis by the Instructional Technology Committee. As mechanical parts wear out and maintenance costs increase to repair equipment, the determination will be made to replace machines based on their operability effectiveness to meet the goals of the district. Technology devices purchased through Erie 1 BOCES will be wiped of all data and returned to Erie 1 BOCES via WNYRIC staff or designee. Barker Central School District owned equipment will be wiped of all data and submitted for approval for disposition according to district policy. The three-year Instructional Technology Plan strives to identify equipment with the highest probability for replacement. This is subject to change as new software/hardware requirements change and unpredictable equipment failures are experienced. It is the goal of the district to maintain a three to five year replacement cycle for equipment. Sustainability of technology resources will be managed by several funding sources including Smart Schools Bond Act funding, Grant funding and District budget allocations to maintain technology hardware investments and subscription based systems and solutions.

**District Technical Support**

The Barker Central School District employs a 1.0 Director of Technology, .6 MicroComputer Support Specialist, full-time Technology Teaching Assistant and contracts services with Erie 1 BOCES for Senior Technician support, WAN Senior Technician support and Technician support.

Anticipated Item or Service	Estimated Cost	Frequency	Potential Funding Source
<b>INVESTMENT PLAN 2018-2019</b>			
End User Computing Devices	\$40,000	Annual	District Operating Budget
End User Computing Devices	\$50,000	One Time	Smart Schools Bond Act
Instructional and Administrative Software	\$28,000	Annual	District Operating Budget BOCES Co-Ser Purchase
Internet Connectivity/WAN Services	\$17,000	Annual	District Operating Budget
Network and Infrastructure	\$20,000	Annual	District Operating Budget
Staffing	\$200,000	Annual	District Operating Budget
Professional Development	\$15,000	Annual	District Operating Budget BOCES Co-Ser Purchase
Peripheral Devices	\$10,000	Annual	District Operating Budget
<b>INVESTMENT PLAN 2019-2020</b>			
End User Computing Devices	\$40,000	Annual	District Operating Budget
End User Computing Devices	\$50,000	One Time	Smart Schools Bond Act
Instructional and Administrative Software	\$28,000		
Internet Connectivity/WAN Services	\$17,000	Annual	District Operating Budget
Network and Infrastructure	\$20,000	Annual	District Operating Budget
Staffing	\$200,000	Annual	District Operating Budget
Professional Development	\$15,000	Annual	District Operating Budget BOCES Co-Ser Purchase
Network and Infrastructure: VOIP	\$150,000	One Time	District Operating Budget Smart Schools Bond Act
Peripheral Devices	\$10,000	Annual	District Operating Budget
<b>INVESTMENT PLAN 2020-2021</b>			
End User Computing Devices	\$40,000	Annual	District Operating Budget
Instructional and Administrative Software	\$28,000	Annual	District Operating Budget BOCES Co-Ser Purchase
Internet Connectivity/WAN Services	\$17,000	Annual	District Operating Budget
Network and Infrastructure	\$20,000	Annual	District Operating Budget
Staffing	\$200,000	Annual	District Operating Budget
Professional Development	\$15,000	Annual	District Operating Budget BOCES Co-Ser Purchase
Peripheral Devices	\$10,000	Annual	District Operating Budget



### **Monitoring and Evaluation**

The Barker Central School District Instructional Technology Committee monitors and evaluates implementation of the District's Instructional Technology Plan on a quarterly basis. In addition, an annual review will coincide with departmental curriculum review with teachers and district administrators. The Instructional Technology Committee and district cabinet members receive summative reports from district technology staff regarding progress toward goals and actions detailed in the instructional technology plan. Data from surveys, evaluation forms, data mentor, data warehouse and other analytical software is used to determine whether a goal is successfully achieved and to evaluate the effectiveness of each goal.

District Administrators, Director of Technology and Instructional Technology Committee are responsible for the collection of data to determine the effectiveness of the Instructional Technology Plan. At minimum, a bi-annual evaluation of the plan and targeted actions will assist in the identification of unmet goals. These goals will be reviewed by the Instructional Technology Committee, District administrators, Board of Education members and other key personnel. A plan will be formulated to devise methods to address or modify the goals as needed. The frequency of evaluations will range from a weekly to annual event dependent on the specific goal or action. Specific frequencies and persons responsible for evaluations have been identified in the detailed goal charts portion of this document and the evaluation processes outlined below. A bi-annual review of the plan will be conducted by the Instructional Technology Committee.

The evaluation process includes but is not limited to:  
(ITC – Instructional Technology Committee)

- Collecting feedback from administration, teachers, students, staff and community members via formal and informal communications.
  - Frequency: Monthly
  - Persons Responsible: Technology Department Personnel, ITC
- Tracking the utilization of district technology through computer lab schedules, digital resource distribution system records, number of users on network, teacher lesson plans, and management software.
  - Frequency: Weekly/Monthly
  - Persons Responsible: Technology Department Personnel, ITC, District Administrators
- Reviewing attendance records and attendee evaluation forms for district technology workshops to evaluate professional development goals.
  - Frequency: Quarterly
  - Persons Responsible: Director of Curriculum & Instruction
- Electronic portfolios will be used to track student achievement and evaluate curriculum/instructional goals.
  - Frequency: Bi-Annual
  - Persons Responsible: District Administrators, ITC
- Analyzing NYS assessment data to evaluate curriculum, instructional goals and the impact of the technology plan implementation on student performance.
  - Frequency: Monthly
  - Persons Responsible: District Administrators, Instructional Staff
- Gathering feedback from parents, students and community residents through web-based surveys, meetings and email.

- Frequency: Bi-annual
  - Persons Responsible: Technology Department Personnel, ITC, District Administrators
- Accountability for implementation will be assessed by reviewing each goal of the plan and receipt of reports for identified responsible person(s) in the plan.
  - Frequency: Bi-Annual
  - Persons Responsible: ITC
- Levels of technological proficiency gained by students, teachers, staff and administrators will be ascertained through survey results.
  - Frequency: Annual
  - Persons Responsible: Technology Department Personnel, ITC
- The effectiveness of disbursement decisions will be analyzed by successful implementation of priorities and allocation of funds to complete planned components according to the established timeline.
  - Frequency: Bi-Annual
  - Persons Responsible: ITC, District Administrators, BOE
- The key indicator of success for each component of the plan will be implementation of identified objectives, meeting established timelines, student achievement and growth of the plan according to changes in available technology and cost effectiveness.
  - Frequency: Bi-Annual
  - Persons Responsible: ITC, Technology Department Personnel, District Administrators, Erie 1 BOCES Support Personnel
- As new technologies evolve and become available, the Instructional Technology Committee will analyze implementation decisions and make recommendations to modify the plan according to the goals established by the district.
  - Frequency: Bi-Annual
  - Persons Responsible: ITC, District Administrators, BOE
- Quarterly review of the plan by the Instructional Technology Committee and monthly reports to the Administrative Cabinet by the Director of Technology will serve as the organizational mechanism to allow for changes in the implementation of the technology plan and its components.
  - Frequency: Quarterly
  - Persons Responsible: ITC, Director of Technology
- When necessary, adjustments and updates to the Instructional Technology Plan are discussed and carried out by the Instructional Technology Committee and technology staff.
  - Frequency: As needed
  - Persons Responsible: ITC, Technology Department Personnel
- Support instruction with new technology tools including podcasting, blogging, electronic presentations, desktop publishing, video production, web tools, mobile computing, etc.
  - Frequency: Bi-weekly
  - Persons Responsible: Instructional Staff, Technology Department Personnel, Erie 1 BOCES Support Personnel

### **Acceptable Use Policy**

Barker Central School students are required to acknowledge the Barker Central School Technology Acceptable Use Agreement at the beginning of each school year. Barker Central School staff are required to acknowledge the Barker Central School Technology Acceptable Use Agreement.

### **Content Filtering**

The Barker Central School District acquires Internet content filtering services, LightSpeed Web Filter, through Erie 1 BOCES for all desktop devices throughout the district. The district also acquires mobile Internet content filtering services for all mobile devices. The mobile content filtering service forces filtering services whether used internally or at external locations. The LightSpeed content filtering solution provides blocking of images or data considered a.) obscene, b.) child pornography or c.) information harmful to minors in accordance with the requirements set forth by the Federal Children's Internet Protection Act. District staff may submit sites (via e-mail) for review to block/unblock; in some cases, if the site is deemed unsafe, the WNYRIC immediately blocks this site to all users.

### 8271 Instruction

#### **SUBJECT: INTERNET SAFETY/INTERNET CONTENT FILTERING POLICY**

In compliance with the Children's Internet Protection Act (CIPA) and Regulations of the Federal Communications Commission (FCC), the District has adopted and will enforce this Internet safety policy that ensures the use of technology protection measures (i.e., filtering or blocking of access to certain material on the Internet) on all District computers with Internet access. Such technology protection measures apply to Internet access by both adults and minors with regard to visual depictions that are obscene, child pornography, or, with respect to the use of computers by minors, considered harmful to such students. The District will provide for the education of students regarding appropriate online behavior including interacting with other individuals on social networking websites and in chat rooms, and regarding cyberbullying awareness and response. Further, appropriate monitoring of online activities of minors, as determined by the building/program supervisor, will also be enforced to ensure the safety of students when accessing the Internet. Further, the Board of Education's decision to utilize technology protection measures and other safety procedures for staff and students when accessing the Internet fosters the educational mission of the schools including the selection of appropriate teaching/instructional materials and activities to enhance the schools' programs; and to help ensure the safety of personnel and students while online. However, no filtering technology can guarantee that staff and students will be prevented from accessing all inappropriate locations. Proper safety procedures, as deemed appropriate by the applicable administrator/program supervisor, will be provided to ensure compliance with the CIPA. In addition to the use of technology protection measures, the monitoring of online activities and access by minors to inappropriate matter on the Internet and World Wide Web *may* include, but shall not be limited to, the following guidelines:

- a) Ensuring the presence of a teacher and/or other appropriate District personnel when students are accessing the Internet including, but not limited to, the supervision of minors when using electronic mail, chat rooms, instant messaging and other forms of direct electronic communications. As determined by the appropriate building administrator, the use of email, chat rooms, as well as social networking websites, may be blocked as deemed necessary to ensure the safety of such students;
- b) Monitoring logs of access in order to keep track of the websites visited by students as a measure to restrict access to materials harmful to minors;
- c) In compliance with this Internet Safety Policy as well as the District's Acceptable Use Policy, unauthorized access (including so-called "hacking") and other unlawful activities by minors are prohibited by the District; and student violations of such policies may result in disciplinary action; and
- d) Appropriate supervision and notification to minors regarding the prohibition as to unauthorized disclosure, use and dissemination of personal identification information regarding such students.

The determination of what is "inappropriate" for minors shall be determined by the District and/or designated school official(s). It is acknowledged that the determination of such "inappropriate" material may vary depending upon the circumstances of the situation and the age of the students involved in online research. The terms "minor," "child pornography," "harmful to minors," "obscene," "technology protection measure," "sexual act," and "sexual contact" will be as defined in accordance with CIPA and other applicable laws/regulations as may be appropriate and implemented pursuant to the District's educational mission. Under certain specified circumstances, the blocking or filtering technology measure(s) may be disabled for adults engaged in bona fide research or other lawful purposes. The power to disable can only be exercised by an administrator, supervisor, or other person authorized by the School District.

The School District shall provide certification, pursuant to the requirements of CIPA, to document the District's adoption and enforcement of its Internet Safety Policy, including the operation and enforcement of technology protection measures (i.e., blocking/filtering of access to certain material on the Internet) for all School District computers with Internet access.

**Internet Safety Instruction**

In accordance with New York State Education Law, the School District may provide, to students in grades K through 12, instruction designed to promote the proper and safe use of the Internet. The Commissioner shall provide technical assistance to assist in the development of curricula for such course of study which shall be age appropriate and developed according to the needs and abilities of students at successive grade levels in order to provide awareness, skills, information and support to aid in the safe usage of the Internet. Under the Protecting Children in the 21st Century Act, students will also be educated on appropriate interactions with other individuals on social networking websites and in chat rooms, as well as cyberbullying awareness and response.

**Access to Inappropriate Content/Material and Use of Personal Technology or Electronic Devices**

Despite the existence of District policy, regulations and guidelines, it is virtually impossible to completely prevent access to content or material that may be considered inappropriate for students. Students may have the ability to access such content or material from their home, other locations off school premises and/or with a student's own personal technology or electronic device on school grounds or at school events.

The District is not responsible for inappropriate content or material accessed via a student's own personal technology or electronic device or via an unfiltered Internet connection received through a student's own personal technology or electronic device. Students' access to the District's computer system (DCS) will automatically be provided unless the parent has submitted written notification to the District that such access not be permitted. Procedures will be established to define the process by which parents may submit a written request to deny or rescind student use of District computers.

**Notification/Authorization**

The District's Acceptable Use Policy and accompanying Regulations will be disseminated to parents and students in order to provide notice of the school's requirements, expectations, and student's obligations when accessing the Internet. The District has provided reasonable public notice and has held at least one (1) public hearing or meeting to address the proposed Internet Safety/Internet Content Filtering Policy prior to Board adoption. Additional public notice and a hearing or meeting is not necessary when amendments are made to the Internet Safety Policy in the future. The District's Internet Safety/Internet Content Filtering Policy must be made available to the FCC upon request. Furthermore, appropriate actions will be taken to ensure the ready availability to the public of this policy as well as any other District policies relating to the use of technology. The Internet Safety/Internet Content Filtering Policy is required to be retained by the school for at least five (5) years after the funding year in which the policy was relied upon to obtain E-rate funding.

47 USC Sections 254(h) and 254(l)

47 CFR Part 54

Education Law Section 814

Adopted: 9/15/14  
BOE Public Forum Date: 5/21/12