



DRAFT Instructional Technology Plan 2022-2025

143 North Pearl St.
Canandaigua, NY 14424

Vision

The Canandaigua City School District will lead and inspire a community of learners to fulfill their academic and creative potential.

Canandaigua City School District Mission Statement

We demonstrate our commitment to the whole child by:

- Providing rigorous opportunities in academics, the arts, and athletics;
- Supporting the social, emotional, and developmental needs of all students;
- Maintaining a focus on character development; and
- Engaging families and our community

Technology Mission Statement

The Canandaigua City School District will use technology to enhance instruction, strengthen communication, ensure security and increase the efficiency of operations while providing opportunities for students and staff to acquire the skills and knowledge necessary to succeed in an increasingly technology-based global society.

Technology Vision Statement

The vision of the Canandaigua City School District is to create an environment where students, teachers, and staff have safe, secure, and reliable access for all to technology that fosters creativity, critical thinking, and higher learning. Teachers will be facilitators of student learning through proficient and meaningful use of learning technologies to address multiple learning styles, motivate and engage students, and support student exploration and growth. Staff will also leverage technology to enable the most efficient and effective administration of K-12 education.

Executive Summary

This technology plan outlines instructional technology goals for the next three years. These goals align with the District's overall and technology-specific mission and vision statements. This plan is a living document that will continue to be revised as needed. It is flexible yet specific enough to act as a guide in decision-making.

Students leaving our school will be expected to enter higher education or the workforce equipped to solve complex problems, function collaboratively with diverse groups, give back to our society, and be prepared to use technology in meaningful ways.

This technology plan outlines the next steps needed to enhance learning in the classroom and prepare students with the necessary technological skills to be successful beyond their experience in Canandaigua Schools.

The plan is developed from the firm belief that technology can significantly enhance the learning environment and improve teaching and learning to produce graduates who are college and career-ready citizens.

The District Technology Committee worked throughout the 2021-2022 school year to help identify technology goals for the 2022-2025 school years. This group utilized the District's Plan for Excellence, our 5-year strategic plan, and the approved Smart Schools Investment Plan.

Lessons learned from the COVID Pandemic

While our 1:1 device program was in place at the start of the COVID pandemic, we responded to the needs of this unique situation. Our IT department worked to ensure connectivity for students and faculty. Technology Integrators ramped up professional development to teach applications and methods of online learning.

We offered hybrid and online learning options in the 2020-2022 school years. Hardware was purchased for faculty to work remotely. Weekly professional development was offered to help support teachers. We also created resources to support families at home. Videos were made for caretakers who supported learning. Courses were created for students to help them with online learning. We purchased licenses to Parent Square, a communication app, to build equity and improve connectivity for all members of our community. Anecdotally, teachers report that they are more comfortable with technology and that students are more literate in device and application usage. As no surprise, instructional technology has become ingrained in our culture over the past two years, and teachers continue to report that technology usage continues to increase.

With more devices and applications in the hands of teachers, our plan continues to respond to the needs of our stakeholders. A focus on digital citizenship will help us improve ethical technology use for our students, focus on supporting faculty with information security concerns, and help adults in homes parent digitally.

Planning Process

The instructional technology plan was developed over several months. However, the plan's goals culminate two years of discussion and committee work on digital citizenship and digital fluency standards. Addressing these two areas was of concern, and the need to

submit a new Instructional Technology Plan allowed us to formulate action steps to implement them. The District Technology Committee (DTC) is a group of representatives from each building, district office, and administration who developed our plan. This committee meets monthly in a virtual environment. Many of the members of the committee are parents in the district.

In the fall, the committee met to review the 2019 to 2022 plan, evaluate its success, and begin the examination of needs. The committee engaged in a “glows and grows” activity to help formulate new goals. Additionally, we used data from the 2021 Professional Development survey for deficiencies related to technology. Committee members then returned to buildings to seek input from the faculty on technology goals.

Early in the winter of 2022, the DTC met to draft goals and action steps. A subcommittee of DTC members worked with the Professional Development Committee to align professional development goals. The Director of Technology meets regularly with the Assistant Superintendent for Instruction and Assistant Superintendent for Business to ensure technology goals align with financial plans.

In the prior plan, the goals for our district centered on building the infrastructure and human capital to support and sustain our 1:1 technology program. In the previous plan, it seemed natural to focus on the rollout of our 1:1 program. The 2022-2025 plan allows us to focus on areas that need improvement. The work of administration, technology support staff, technology integrators, and faculty allowed us to meet goals and have a successful technology program.

When the pandemic forced closures in the spring of 2020, our district was able to pivot into remote learning and continue supporting instruction in various formats into the 2020-2021 school year. While we have a complete 1:1 device program, infrastructure to support usage, and a range of professional development to support instructional technology integration, our plan will continue to strengthen our program.

The new plan gives us action steps towards integrating the mandated digital fluency standards. Implementing these standards will allow us to improve our students’ much-needed computer science skills. Also, it will help us address ethical technology use with our students by implementing a digital citizenship program and creating support to help families digitally parent their students. Focusing on these two areas allows us to address gaps that have been difficult to solve up to this point.

Technology Environment

The Canandaigua City School district maintains a robust network infrastructure. The workstation cabling consists of Cat 5E and Cat 6 UTP Copper cabling run back to distributed IDFs. These IDFs connect to a building MDF via redundant single-mode fiber cabling. The building campuses connect via single-mode fiber in a redundant loop configuration providing multiple physical paths to each major building. All district switches provide at least 1Gbps connections. IDF and building campuses connect with at least (2) 10 Gbps connections for redundancy. Network infrastructure status and performance are monitored and logged in near real-time. All critical alerts are emailed or texted to the IT support staff.

Two separate ISP vendors provide Internet access, each with enough bandwidth for the district load. These connections are load-balanced for both incoming and outgoing traffic. The configuration also includes failover of all services if one of the IPSs is down.

The primary MDF for the district in the Primary-Elementary campus is known as the Network Operations Center (NOC). This location houses the physical and virtual infrastructure needed to support the district data and communications systems. A secondary district MDF is located in the Middle School to provide redundancy for most major systems in the NOC.

There is a dedicated help desk space in both the Middle School and High School with IT support staff working alongside student support staff to serve the technical needs of both the staff and students. The Primary-Elementary school has several IT support staff located in this building. We also subscribe to many BOCES cosers for our technical environment, which provides an additional layer of support for our infrastructure.

Building Technology

Each classroom throughout the district has a presentation station consisting of a desktop computer and an interactive whiteboard. Every staff member is assigned a personal touch-enabled device on a 3-4 year replacement cycle.

Students in grades 1-12 are issued a touch-enabled Chromebook, and Ipads are issued to kindergarten students. Students in grades 6-12 can take their devices home each night and during vacations, including summer break. Students in grades K-5 keep their devices in classroom carts at night and on all school breaks unless needed at home for instruction. Each student retains their assigned devices from grades 4-12 year to year. Each of these devices is replaced by the district every three years. There are also several windows computer labs throughout the District to support additional computing needs such as engineering, business, and programming classes.

We offer WIFI hotspots to any student who does not have sufficient Internet access to complete schoolwork with their assigned device at home. Each student has access to an alternative device while their issued device is being repaired. The district also has 1.5 dedicated staff for Technology Integration which help provide support to our technology learning environment.

The Major District Technology Goals for 2022-2025

1. Write and implement a digital citizenship curriculum aligned to the district's digital skills map and appropriate to the needs of each building to improve cyber behavior. Provide resources for parents to support our efforts to educate students on cyber-hygiene
2. Introduce the NYS Computer Science and Digital Fluency Standards into the curriculum.
3. Create, provide, and sustain both live and self-paced content-specific professional development opportunities for all staff to utilize current digital technologies and resources better.

Canandaigua City School District Technology Committee (DTC)

The District Technology Committee, chaired by the Director of Technology, consists of parents, building administrators, board members, district office personnel, and teacher representatives from all buildings. The role of DTC members is to make technology recommendations to the District administration for consideration. Appropriate input from the building is sought whenever a recommendation is to be considered. An additional role is to keep all parties informed of the technology-related processes, procedures, and decisions. The DTC meets monthly to accomplish its responsibilities.

The District Technology Committee (DTC) responsibilities:

- Writing, overseeing, and revising the District's Comprehensive Instructional Technology Plan
- Utilizing the Plan for Excellence (The district's 5-year strategic plan) data, the District defined purposes for technology guidelines and ideas from staff, students, and parents to make technology policy and budgetary suggestions.
- Working closely with the Professional Development Committee in surveying and defining the technology training needs of staff.

The Committee will also be responsible for evaluating its effectiveness and remain flexible

in its function to accommodate changing needs.

The Guiding Principles of Technology in CCSD

Technology at Canandaigua City School District will:

- Enable graduating students to have the necessary technical skills and proficiencies to be successful in the workforce and higher education
- Be integrated into all areas of the curriculum to meet the needs of all learners
- Support ongoing staff development opportunities
- Be current, available, and accessible to all students, faculty, staff, and administration
- Improve the effectiveness of administrative tasks
- Be used to collect, assess, and share performance information
- Provide access to global information resource
- Periodically re-evaluated to ensure that we are providing the most effective teaching and learning tools to our students and staff within the districts means
- Will include technology training for all students, faculty, staff, and administration in a practical, systematic, and ongoing manner.
- Be secure, stable, reliable, inventoried, and well-maintained, including appropriate backup systems.
- Provide differentiated technology-based learning options to meet students' individual needs; explore alternative delivery of distance learning options for students, and provide students with any time/anywhere access to electronic content to support classroom instruction.

Students with disabilities or specialized needs

Technology is a beneficial tool for Students with Disabilities and English as a new language. Integration of technology allows them to participate, interact and work independently using various assistive tools and devices. The district's Special Education Department works directly with the District Technology Director to ensure that assistive technologies are available to all students with specific technology accommodations. Text to speech, speech to text, magnification, contrast enhancement, and touch devices are some technologies used daily by this population of students. Software that can automatically adjust to the individual level of learning through automated assessment is used throughout instruction in the district, which self-levels the rigor for each student based on their skills. A couple of titles used in this way include iReady and Zern.

Professional Development

The Professional Development Plan for CCSD is comprehensive to allow educators and

administrators to become proficient in all technology available to the district. Each year, the District provides a wide range of professional development for our teachers, teaching assistants, administrators, and other staff. Some of these training topics include the instructional integration of hardware and software. Some of the vital technology professional development opportunities offered include tablets, Chromebooks, interactive whiteboards, G-Suite, Schoology learning management, Nearpod, WeVideo, etc. The district strongly believes that the instructional and leadership staff and the technical support staff need higher-level professional development to continue in their roles. There are currently one-and-a-half staff members dedicated to instructional technology integration across the district. The district is committed and will continue to provide professional development on an ongoing basis to the staff to allow them to utilize the technology tools and resources in the most effective manner possible.

The technical skills needed by the teachers are identified and presented as expected proficiencies for students in our technology skills list. This list identifies vital technology-related proficiencies or skills the students need to succeed upon graduation. These proficiencies are listed along with guidance to which grade levels the skill should be introduced, demonstrated with teacher guidance, or if the student should be proficient with the skill on their own.

Staff is encouraged to develop their technical skills in any of the following formats:

- Superintendent's Day and other In-Service Days – Classes in technology subjects are taught by tech integration specialists.
- Faculty and Department Meetings - Several of these meetings are dedicated to technology professional development led by tech integration specialists.
- Peer Observation – Teachers are encouraged to offer their technical skills and classroom implementations for viewing by other teachers.
- Course Work - Enrollment and completion of a District approved technology instruction learning experience. Including but not limited to online learning.

In addition to learning technical skills, the teachers are also instructed in various ways of implementing these skills within their daily classroom routines.

Technology hardware, software, and trends are constantly being tracked for needed updates in skills. This data is evaluated by the Director of Technology and Director of

Professional Development and their respective committees for possible changes or additions to the current offerings.

Implementation and Evaluation of the Plan

Evaluation is a crucial part of a successful technology plan. We have developed metrics to measure the success of the plan. The Director of Technology is responsible for the evaluation plan and monitoring and adjusting to meet new or changing needs.

Goal #1

Write and implement a digital citizenship curriculum aligned to the district's digital skills map and appropriate to the needs of each building to improve cyber behavior. Provide resources for parents to support our efforts to educate students on cyber-hygiene.

Context

Our organization has had continuous discussions on digital citizenship, and emerging from the Pandemic has sharpened our need for us to take action on this topic. We believe that a goal focused on this topic will help hold us accountable.

Action Plan

Action Step	Responsible Stakeholder	Anticipated Date of Completion	Anticipated Cost
Adopt Common Sense Media Digital Citizenship curriculum district-wide via curriculum adoption process.	Director of Technology	2022-2023	None
Establish Digital Citizenship Cohorts based upon phased in grade level.	Building Principals, District Technology Committee, Dig-Cit Subcommittee	2022-2023	None
Develop an annual reporting process for cyber behavior related incidents.	Director of Data, Director of Technology	2022-2023	None
Evaluate curriculum of first phases	ASI, Director of	2022-2023	Curriculum

of grade levels for what is being done.	Technology, Principals		Writing
Develop curriculum for first phase grade levels.	Dig-Cit Subcommittee	2022-2023	Curriculum Writing
Identify ways to support families and the school community with Digital Citizenship. Create action plan for parent events and resources.	District Technology Committee	2022-2023	Curriculum Writing & Training
First phase grade levels get curriculum. (K,3,6,9)	Building Principals, Grade-level leaders & CALTS	2023-2024	None
Evaluate and develop curriculum for second phase grade levels.	Dig-Cit Subcommittee	2023-2024	Curriculum Writing
Second phase grade levels get curriculum. (1,4,7,10)	Building Principals, Grade-level leaders & CALTS	2024-2025	None
Evaluate and develop curriculum for third phase grade levels.	Dig-Cit Subcommittee	2024-2025	Curriculum Writing
Third phase grade levels get curriculum. (2,5,8,11,12)	Building Principals, Grade-level leaders & CALTS	2025-2026	None

Indicators / Measures

- The Digital Citizenship development team became certified Common Sense Media Educators.
- All schools become certified Common Sense Media Schools.
- The district became a certified Common Sense Media District.
- Parents have multiple methods for accessing information and learning about student digital citizenship and digital parenting.
- Lower cyber-related incidents are observed in the district due to the implemented digital citizenship curriculum.

Goal #2

Introduce the NYS Computer Science and Digital Fluency Standards into the curriculum.

Context:

To meet the state-mandated implementation of these standards, we adopted this goal. At the same time, we recognize that these standards will help us create a robust curriculum for student success in their adult lives and provide exposure to career opportunities. Our action plan involved three levels of standards and our efforts to infuse the standards into our curriculum. These levels are defined in the following way:

- “Ready” level suggests these are standards already in place
- “Refine” level indicates these standards are unevenly executed in the curriculum, and we need to work to distribute instruction across the curriculum equitably
- “Reach” levels are standards that will involve planning, creativity, and perhaps new processes or courses.

Action Plan

Action Step	Responsible Stakeholder	Anticipated Date of Completion	Anticipated Cost
Identify stakeholders for writing curriculum and roll-out committee	Building principals, Direction of Technology, CALTS	Spring 2022	None
Create a committee to examine standards and meet for a two-day curriculum writing and professional development on the standards.	Building principals, Direction of Technology, CALTS	Summer 2022	Curriculum writing
Complete analysis of standards by grade band to identify current practices.	Standards Committee	Summer 2022	Curriculum writing
Use analysis of results to develop common/equitable experiences, revised experiences to reach all students. Standards are broken into Ready, Refine and Reach to help	Standards Committee, Technology Integrators, Director of	Summer 2022	Curriculum writing

organize the implementation.	Technology.		
Use grade-level teams to implement common “Ready” standards into instruction.	Grade-level teams	School year 2022-2023	Release time
Team of teachers to plan “Refine” level standards into plans and projects to implement for all students	Standards Committee, Grade-level teams	School year 2022-2023	Release time or curriculum writing
Use the District Technology Committee to explore how to implement “reach” standards.	District Technology Committee	May 2023	None
Implement “Refine” standards	Grade-level teams	School year 2023-2024	TBD
Planning to implement the “Reach” standards	Standards Committee, Grade-level teams	School year 2023-2024	Release time or curriculum writing
Implement “Reach” standards	Grade-level teams	School year 2024-2025	TBD
Identify teachers to use Smart Start Grant. Maximize participation.	Director of Technology, Building Principal, Director of Professional Learning	Ongoing	None

Indicators / Measures

- Committee has met and examined standards. The document identifies levels of practice that align with standards.
- Break standards into Ready, Refine, and Reach groups/categories.
- The curriculum is written, approved, and implemented.
- Maximize participation in Smart Start Grant.
- Assessments implemented and results evaluated.

Goal #3

Create, provide, and sustain live, self-paced, and content-specific professional development opportunities for all staff to better utilize current digital technologies and resources.

Action Plan

Action Step	Responsible Stakeholder	Anticipated Date of Completion	Anticipated Cost
Develop, use, and analyze annual professional development surveys to identify training needs.	Director of Technology, Director of Professional Learning	May-June annually.	None
Conduct monthly analysis of attendance in professional learning offerings.	Director of Technology, Director of Professional Learning	On-going	None
Analysis of PD by topic (For example, technology, SEL, literacy, instructional practices, Digital Citizenship, mental health) by format--live, async,	Director of Technology, Director of Professional Learning	On-going	None
Work with principals and directors to plan department and faculty meetings. Maximize the professional learning opportunities for faculty.	Principles, Directors, Grade-level Leaders, CALTs	On-going	None

Indicators / Measures

- Participation data:
 - Data shows an increase in new teachers participating in professional learning.
 - Data shows an increase in total faculty participation in professional learning.
- Faculty, department, and grade-level agendas reflect more professional learning and more technology training;
- Technology Integrators meet at least once per semester with each department or grade-level leader to plan training for the group.
- Utilize the Professional Learning Survey to prove a reduction in barriers to PD

Financial Plan

The Canandaigua City School District is committed to maintaining the technology needed for our students, staff, and administration to provide a high-quality education that enables our students to thrive in this ever-growing technological world. To support the district's technology needs, the Canandaigua City School District will use several funding sources: Smart Schools Bond, Stimulus Funding, General fund budget, and Erate. The district will also pursue state, local, and federal grants as they become available.

The district has a well-thought-out replacement plan for each of the components that comprise the computing systems of the District. The District works to maintain a technology budget to sustain this replacement plan.

District Policies And Documents

- [7391 The Children's Internet Protection Act: Internet Content Filtering/Safety Policy](#)
- [7390 Student Use of Computerized Information Resources](#)
- [7315 Bullying: Peer Abuse in the Schools](#)
- [7552 Student Privacy, Parental Access to Information, and Administration of Certain Physical Examinations to Minors](#)
- [3320 Confidentiality of Computerized Information](#)