
Iroquois Central School District

06/2015 to 06/2018

Technology Plan

Plans and Policies for Technology in Education

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Required Element – Introductory Material

Our Mission

The Iroquois Central School District, in being responsive to the students and parents it serves, will promote innovation and change in a continuous search for more effective and efficient ways of meeting our mission as an institution of teaching and learning.

Our District

The Iroquois Central School District embrace approximately 84 square miles within the Towns of Elma, Marilla, Wales, Aurora, Lancaster and Bennington. We offer a unique blend of suburban/rural living which combines residential and agricultural areas. It is located approximately fourteen miles southeast of Buffalo in Erie County. The district has a population of 22,000 with a limited industrial base.

The District serves 2,439 students in six schools. Our main campus encompasses the High School, Middle School, and Intermediate School. Our Primary Schools are located in the surrounding towns of Elma, Marilla, and Wales. The District employs 250 faculty and staff members.

There are 21 churches in the district and many active service clubs. The State University of New York at Buffalo, The State University College at Buffalo, Canisius, Daemen, D'Youville, Trocaire and Erie Community Colleges are all located in the immediate area. In addition, the City of Buffalo offers nearly every type of cultural and recreational activity including a renowned Philharmonic Orchestra, a National Football League Team, a National Hockey League Team, a minor league baseball team, and the world famous Albright-Knox Art Galley. The area also boasts an excellent range of live theater and entertainment opportunities, including Shea's Buffalo, Studio Arena Theater and Art Park.

Technology Committee shall consist of:

- One central office administrator
- One secondary principal
- One primary principal
- One Director of technology
- Two parents
- Two committee members
- One student

Required Element – Vision and Goals

District and Technology Vision

The Iroquois Central School District, in being responsive to the students and parents it serves, will promote innovation and change in a continuous search for more effective and efficient ways of meeting our mission as an educational institution of teaching and

learning. In support of the Iroquois Central School District Mission Statement, the Technology Plan will integrate technology into every aspect of the educational process to enhance lifelong learning.

The goal of the Iroquois Central School District Technology Committee is to help prepare students for life in an global society. To accomplish this, technology must be integrated into the curriculum, so that students will learn to apply technology in the use of real-world applications.

In accord with New York State Education Department's Long Range Plan for Technology in Elementary and Secondary Education, the Compact for Learning, and the Common Core Learning Standards, this plan is scheduled in phases, which will make its implementation fiscally and educationally manageable. Working together with the Erie 1 BOCES Regional Information Center, local educational specialists, and local industry program and systems analysis managers, the Technology Department in partnership with the Technology Committee has developed the following plan. The on-going use of available state-aid will help the district realize the plan's broad objective - preparing students to work with the technology of the future.

District Technology Goals

The goal of the Iroquois Central School District (CSD) Technology Committee is to help prepare students for life in a global society. To do this, technology must be integrated into the curriculum, so that students will learn to apply technology in the use of real-world applications.

The Iroquois CSD has a district-wide Technology Committee, consisting of parents, board members, administrators, teachers and community members, who actively review district curriculum priorities. One of the project outcomes is to improve the performance of students on the new state assessments through the increased use of technology in alignment with learning standards. Whether the technological equipment is used as a teaching tool or as a vehicle for content area exploration, the equipment will serve a valuable pedagogical purpose by helping students apply theoretical knowledge into practical knowledge.

In order to achieve the following goals, the Iroquois CSD Technology Department will work cohesively in order to implement this Technology Plan. Services will include:

- ❑ Coordinating and integrating access to information and telecommunication services (such as telephones, cell phones, pagers) using efficient and cost-effective methods;
- ❑ Providing a seamless support system for students and staff to enable their interaction in the technological environment to achieve their educational and career goals;
- ❑ Providing a response system to be able to meet the needs of all students and staff quickly and accurately;
- ❑ Developing and enforcing Board policies for the ethical and legal use of technology by students and staff.

YEAR 1:

Focus on district hardware and software. Software Updates are done on the student information system (eSchool) as well as to the districts' financial management program and library systems (Destiny). Continue to meet equipment needs of buildings (i.e. computers, printers, data projectors, scanners, copier machines). Add assistive hardware and software such as classroom sound systems (SoundField), ClearNote visual assistance systems, data projectors (6-12), laptops with accessibility enhancements, and core subject software suites to provide additional reinforcement of curriculum and standards. The District will also provide laptop carts at each building for use in classes as well as the library media centers. The district will also stay up to date with new technology as it becomes available such as e-book readers, ipads, etc. as well as software: My Learning Plan, TeachScape, Lead 21, Aims Web, Envisions Math, Grade.

YEAR 2:

Provide maintenance to switches and servers as needed. Replace/repair computers, printers, copy machines, projectors as needed. Continue to install ceiling mounted projectors and classroom sound systems (Front Row) grades 6-12 until all rooms are outfitted.

YEAR 3:

Focus on the classroom, including instructional software, teacher professional development, and curriculum implementation for students (i.e. Castle Learning, IXL and Brain Pop for student internet safety and Model School Internet Safety Moodle for teachers and staff). Students and staff will be trained on social networking sites, Web 2.0 tools and web sites that can be used to enhance student learning (Castle Learning, Video Streaming services, Library Media services, etc.) Replace/repair computers, printers, copier machines, projectors as needed.

Section I-A – Curriculum Integration

In addition to the *National Educational Technology Standards (NETS)* and the models of other states and school districts, the Iroquois Central School District's K-12 Instructional Technology Standards also incorporates the recommendations of the Partnership for 21st Century Skills. The Partnership's framework for 21st century learning includes six key elements:

1. Core subjects as identified Elementary Secondary Education Act.
2. 21st century content that includes global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; and health and wellness awareness.
3. Learning and thinking skills that include critical thinking and problem solving, communication skills, creativity and innovation skills, collaboration skills, contextual learning skills, and information and media literacy skills.
4. Information and communications technology (ICT) literacy, enabling students to learn, think critically, solve problems, use information, communicate, innovate, collaborate, and social network.
5. Life skills that include leadership, ethics, accountability, personal productivity, personal responsibility, people skills, self-direction, and social responsibility.
6. 21st century assessments that measure the core subjects, 21st century content, learning and thinking skills, ICT literacy, and life skills. The use of modern technologies in assessment is recommended to "increase efficiency and timeliness."

As the district begins to employ these standards, the district will continue to invite teachers, administrators, other educators, and business people to assist in the continuing development and implementation of these Standards.

The New York State Board of Regents recognizes the diversity of students in the State, including those students with limited English proficiency, the educationally disadvantaged, gifted and disabled students. This district is committed to helping students overcoming these disparities by providing a wide range of opportunities to provide hands-on learning. Teachers of inclusion students will participate in the implementation of this plan and will be provided with the skills they need to help all students learn about and use the technological equipment.

Iroquois CSD administrators and staff envision a school system, which serves the educational needs of everyone in the community. All involved in the system--

administrators, teachers, staff, and student and adult learners--will develop a broad knowledge base through continual learning, re-training, and development. Instructors will function as facilitators, working in a shared decision-making process, when developing instructional and tutorial programs for teachers. This will also integrate the district's professional development plan and APPR for teachers.

Providing up-to-date facilities and equipment will accommodate these educational goals. The schools will be equipped with state-of-the-art means of facilitating learning. Within this complex, learning areas will be optimally organized and utilized. The school district will work cooperatively with the academic and business communities.

Section I-B – Student Achievement
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IF THE IROQUOIS CENTRAL SCHOOL DISTRICT WANTS TO REMAIN COMPETITIVE, AND CONTINUE TO REFLECT THE DEMANDS OF THE 21ST CENTURY. WE ARE FOCUSED ON DEVELOPING A CULTURE OF HIGHER STUDENT TECHNOLOGICAL EXPECTATIONS, REGARDLESS OF RACE, ETHNICITY, OR INCOME. THE BUILDING SITE BASED MANAGEMENT TEAMS SHALL DISCUSS AND PROVIDE INSIGHT INTO THE GOALS AND OBJECTIVES OF THE TECHNOLOGY PLAN. THESE TEAMS SHALL MEET MINIMALLY THREE TIMES PER SCHOOL YEAR.

With the technology that the district provides the students can:

- Demonstrate the ability to use computers and learning technologies.
- Integrate strategies to utilize technologies inside and outside of the classroom.
- Use technology for their own development as independent learners.
- Have the ability to access information, exchange ideas, conduct research, and communicate thoughts using electronic technology.
- Appreciate current technology and project the future impact of technology.

The Iroquois Central School District Educational Technology Standards publication provides a set of guidelines describing what students should know and be able to do in order to use technology for learning in school and for lifelong learning. Our school district can use these recommended standards to make sure that our students are comfortable and proficient with multiple technology tools.

As students learn these skills, they should apply them every day to understand their skills importance. The teaching of these skills should be integrated into the general curriculum, as opposed to being taught as isolated skills. The skills have been divided into three core technology standards.

To promote a sustainable integration of technology within the learning experience in the Iroquois Central School system, the district has adopted a technology framework that classifies all uses of technology into three skill sets and three technological proficiency

standards. The classification allows the district's instructional professionals and administration the integration of technology in a simplified and uniformed manner. This will create a sustainable approach to technology integration.

Three Technological Skill Sets

Skill Set I - Information Dissemination: Information dissemination is defined as the skill associated with the use of technology as it pertains to the collection, analysis, and one-way distribution of information regarding a particular idea or set of information.

Skill Set II - Information Management: Information management is defined as the skill associated with the use of technology, as it pertains to the management of digital information. Information management encompasses the generation and collection of vast amounts of information, and making that information accessible.

Skill Set III - Social Networking: Social networking is defined as the skill associated with the use of online digital technologies that allow users the ability to interact and share data with other users. Known as computer-mediated communication, these technologies allow the user to establish cooperative information sharing systems.

Three Technological Proficiency Standards

Standard 1. Basic Operations, Concepts, and Productivity Tools

Demonstrate proficiency in the use of computers and applications, as well as an understanding of the concepts underlying hardware, software, and connectivity.

This standard includes:

- Proficiency in basic productivity tools such as word processing, spreadsheet, database, electronic research, e-mail, and applications for multi-media presentations and graphics (power point);
- Conceptual understandings of the nature and operation of technology systems; and
- Learning and adapting to new and emerging technology tools.

Standard 2. Digital Citizenship, Ethics, Society, and Safety

Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school, and in society.

This standard:

- Relates to social, ethical, and human issues. It promotes positive attitudes toward the uses of technology, as well as responsible use of information. This standard also includes recognition of technology's impact on civic participation, the democratic process, and the environment.
- Aims to ensure that students understand general rules for safe Internet practices, including how to protect their personal information on the Internet.
- Is designed to help students develop an awareness of the personal image that they convey through information they post on the Internet.
- Aims to ensure that students need to understand federal and state laws regarding computer crimes.
- Supports students in exhibiting leadership for digital citizenship.

Standard 3. Research and Information Fluency; Critical Thinking, Problem Solving & Decision Making; Communication and Collaboration; and Creativity and Innovation

Demonstrate the ability to use technology for research, critical thinking, problem solving, decision-making, communication, collaboration, creativity and innovation.

This standard focuses on applying a wide range of technology tools to student learning and everyday life.

Research and Information Fluency

When technology is used appropriately and proficiently it will:

- Help students understand how to “process” information; that is, engage in computational thinking.
- Allow students to manage data and generate reports speedily.
- Enable students to become competent in using technology for project management, analysis and collaboration.
- Help students plan strategies to guide their inquiry.

Critical Thinking, Problem Solving and Decision Making

When technology is used appropriately and proficiently it will:

- Help students understand and think differently. (For example, technology allows people to quickly design, analyze, and alter three-dimensional objects with many variables. This enables a different kind of thinking--not sequential and linear as in the past.)
- Provide students with a way to select the “right” tool for the task.
- Allow students to identify and define authentic problems and ask significant questions for investigation.

- Help students explore alternative solutions.

Communication and Collaboration

When technology is used appropriately and proficiently it will:

- Help students develop appropriate skills for technology-based communication, including methods for engagement, feedback, and understanding while using email, videoconferencing, telephone, and so on.
- Help students interact, collaborate, and publish with peers.
- Allow students to engage with learners of other cultures.

Creativity and Innovation

When technology is used appropriately and proficiently it will:

- Help students create original works.
- Allow students to use models and simulations to explore and create new ideas, identify trends, and forecast possibilities.

Application of Technology

When technology is used appropriately and proficiently it will:

- Provide students with an understanding and appreciation of how technology is used in different careers.
- Give students a general awareness of technologies that are currently available, even if they are not used in their school or their home, such as handheld computers, cell phones, global positioning devices, videoconferencing systems, blogging, social bookmarking, etc.
- Position students to learn and use new technologies as they become available.

Specific technology skills will be organized by building levels within the Iroquois School District.

Elementary Level (K – 3)

Intermediate Level (4 – 5)

Middle School Level (6 – 8)

High School Level (9 – 12)

The Iroquois Central School District technology standards will specify technology skills by the specific building level. The letters I, D, M, and E in the tables in the following

pages indicate whether the specific skills and standards should be Introduced, Developed, Mastered, or Extended at a particular grade level. Although these proficiency levels are recommended by the Department of Education, the Iroquois Central School's technology standards have specified building level technology proficiency. These proficiencies have been developed based upon the ever changing availability of technology, as well as the readiness of the district's students. It is important to mention again that these standards, much like the very nature of the technology the district is looking to integrate, is a work in progress and will continuously evolve and change, based upon market influence, teacher and student feedback, as well as the district's quality management framework.

Skills / Knowledge Acquisition

The skills/knowledge enumerated in this document can be acquired by students in a variety of ways:

- Everyday classroom activities (gaining technology skills while learning the content of the curriculum)
- Specific course work (e.g., taking a web-based technology courses)
- Independent study (e.g., supporting a specific project or developing learning communities)
- An after-school activity (e.g., publishing a traditional or digital newsletter, or workshops)
- Peer tutoring (e.g., a high school student coaching a middle school student)

Action Plan for I-B Student Achievement thru Technology Standards				
Goal: Incorporate Technology Standards (shown on the following pages by grade)				
Actions needed to achieve goal	Staff Development	Person(s) Responsible	Date each action will be Completed	Indication of Success
Approve Tech Standards	Summer Review	Tech Committee, District Admin	September 17, 2013	BoE approval
Distribute Tech Standards	During staff, department and committee meetings	Tech Committee, Team Leaders, Building Admin	September 30, 2013	Minutes of meetings, admin reports
Incorporate Tech	Staff development	Asst Superintendent	December	Review of

Standards into Curriculum	days, grade level and department meeting trainings, CSLO and ECTC offerings to give ideas for integration, one on one instruction as needed from Director of Instructional Technology	will coordinate with CSLO, ECTC, Building Admin and department heads on technology infused curriculum development – having teachers provide one Tech Standard infused lesson plan for review	2013-2016	sample tech plans by Asst Supt, Tech Committee and Building Admin
Provide ongoing support for tech integration	Add'l staff development via staff days, ECTC, CSLO, district inservice days will be provided to allow teachers the opportunity to create and collaborate on tech infused lesson plans	Asst Superintendent will coordinate with CSLO, ECTC, Building Admin and department heads on technology infused curriculum development – having teachers provide one additional Tech Standard infused lesson plan for review	February 2013-2016	Review of second tech plans by Asst Supt, Tech Committee and Building Admin to demonstrate understanding of tech infused lessons
Ongoing work to update technology standards and distribute them to appropriate personnel	Tech Committee meetings to revise and review lesson plans and technology standards	Tech Committee	Ongoing throughout years two and three	Updates will be added as needed after Tech Committee meetings

Exploratory Skills for Elementary Level:

Technology undoubtedly opens up exciting, engaging, and authentic opportunities for learning. However, the use of technology in the learning environment should strive to complement thoughtful educational instruction in a seamless manner. The Iroquois Central School District

encourages both traditional and technologically enhanced instructional practices in the learning environment, to help students accomplish the skills set of a successful and productive 21st century learner. For example, although keyboarding proficiency on a computer is vital for students to achieve the 21st century skills set, students still need to continue developing legible handwriting. By the same token, even though 21st century learners need to develop proficiency in electronic research, students still need to know how to find a book in a library. Throughout their years as a student in the Iroquois School District, students will grow to regard technology as one of the many tools that can be used to promote life-long learning, problems solving, critical thinking, improve their creative capacities, individual productivity, and their capacity to collaborate in meaningful, authentic “real-world” manner.

Iroquois Central Technology Standards				
Elementary Grade Level K - 3				
Technology Exploratory Skills and Expectations				
<p>At the grade levels K - 3, technology should not replace the manipulatives, pencil-and-paper, and other manual methods through which children acquire basic skills. Given this context, the instructional technology standards for the earliest grades allow the teacher flexibility in deciding when students are ready to use technology. For this reason, the competencies listed for K – 3 are described as exploratory concepts and skills. These are skills that will be introduced and, in some cases, developed in elementary grades and mastered in the intermediate, middle or high school levels.</p>				
1. Basic Operations and Productivity Tools	Grade			
	<i>I = Introduce</i>			
	<i>D = Develop</i>			
	<i>M = Master</i>			
	<i>E = Extend</i>			
1.1 Basic Operations	K	1	2	3
K-2: 1.11 Demonstrate basic steps in using available hardware and applications (e.g., turn on a computer, launch a program, and use a pointing device such as a mouse).	I	D	D	M
K-2: 1.12 Describe how people use many types of technologies in their daily lives (i.e. computers, cameras, audio/video players, cell phones, televisions, traffic lights, wrist watches, coffee makers, cash registers, etc.).	D	D	D	M
K-2: 1.13 Recognize and name major components of a computer and demonstrate an understanding of the basic functions (monitor, screen, keyboard, mouse).	D	D	D	M

K-2: 1.14 Explain that icons (e.g., recycle bin/trash, folder) are symbols on the computer used to signify a command, file or record (e.g., the picture of a disk may refer to saving a file).	I	D	D	M
K-2: 1.15 Describe the basic care of computer hardware and various media storage devices (e.g., keyboard, monitor, LCD, audio/video tapes, CDs or DVDs).	I	D	D	M
K-2: 1.16 Identify, locate, and use letters, numbers, and special keys (e.g., arrow keys, space bar, Shift, Enter/Return, Backspace, Delete), on the keyboard.	I	D	D	D
K-2: 1.17 Recognize the functions of basic file menu commands (e.g., New, Open, Close, Save, Print).	I	D	D	M
K-2: 1.18 Identify the home row in the keyboard.		I	D	M
<i>1.2 Word Processing and Desktop Publishing</i>	K	1	2	3
K-2: 1.21 Use a simple word processing program to enter, edit, and delete letters and numbers.	I	D	D	M
K-2: 1.22 Insert and size a graphic in a word processing document.	I	D	D	D
K-2: 1.23 Use word processing to write, edit, print, and save assignments.		I	D	M
<i>1.3 Database and Spreadsheet (Tables/Charts and Graphs)</i>	K	1	2	3
K-2: 1.31 Explain that that a simple computer graphing application can be used to create a table or chart to display data.	I	D	D	D
K-2: 1.32 Explain that computers can store and organize information so that it can be searched.	I	D	D	M
<i>1.4 Internet and Multimedia</i>	K	1	2	3
K-2: 1.41 Demonstrate an understanding that the Internet links computers around the world, allowing people to access information and communicate.	I	D	D	M
K-2: 1.42 Demonstrate the ability to use tools in painting and/or drawing programs.	D	D	D	D
K-2: 1.43 Identify different components and capabilities of multimedia (i.e., text, sound, images, and color).	I	D	D	D

Iroquois Central Technology Standards				
Elementary Grade Level K - 3				
Technology Exploratory Skills and Expectations				
2. Ethics, Society, and Safety	Grade			
	<i>I = Introduce</i>			
	<i>D = Develop</i>			
	<i>M = Master</i>			
	<i>E = Extend</i>			
2.1 Ethics	K	1	2	3
K-2: 2.11 Show responsible use and care of computers, peripheral devices and resources.	M	E	E	E
K-2: 2.12 Explain ownership of creative works found on the Internet, as well as the importance of giving credit to the creators of those works when using them in student projects.	I	D	M	M
2.2 Classroom/Society	K	1	2	3
K-2: 2.21 Demonstrate respect for others when sharing computers.	M	E	E	E
K-2: 2.22 Follow classroom rules for the responsible use of computers.	M	E	E	E
K-2: 2.23 Describe acceptable and unacceptable uses of technology (e.g., computers, phones, 911, Internet, email) at home and at school.	M	E	E	E
K-2: 2.24 Work independently as well as collaboratively with a partner or group when using technology.	D	M	E	E
2.3 Health and Safety	K	1	2	3
K-2: 2.31 Follow the school rules for safe and ethical Internet use. (Use of Internet in this grade span is determined by district policy.)	I	D	M	M
K-2: 2.32 Identify procedures for safely using basic communication tools (e.g., e-mail, telephones) with assistance from teachers.	D	M	E	E
K-2: 2.33 Explain that a password helps protect the	I	D	M	M

privacy of information.				
K-2: 2.34 Demonstrate knowledge of ergonomics and electrical safety when using computers.	I	D	D	D

Iroquois Central Technology Standards

Elementary Grade Level K - 3

Technology Exploratory Skills and Expectations

3. Research, Problem-Solving, and Communications	Grade			
	<i>I = Introduce</i>			
	<i>D = Develop</i>			
	<i>M = Master</i>			
	<i>E = Extend</i>			

3.1 Research (Gathering and Using Information)	K	1	2	3
K-2: 3.11 Recognize web browsers and associate them with accessing resources on the Internet; compare the capability of a computer that is connected to the Internet to one that is not.	I	D	D	M
K-2: 3.12 Use various age-appropriate technologies to locate and collect information (e.g. audio/video players, CD-ROMs, DVDs, teacher-selected web sites, databases in the school library or in a public children's library).	I	D	D	D
K-2: 3.13 Use teacher-selected Internet resources to identify and discuss the elements that make an online resource useful and appropriate.	I	D	D	M
K-2: 3.14 Use application programs (e.g. age-appropriate word processing, graphic organizer, database, spreadsheet) to organize and analyze information.		I	D	D
3.2 Problem Solving	K	1	2	3
K-2: 3.21 Select the most appropriate type of technology to use for a specific task.	I	D	D	D

K-2: 3.22 Use curriculum-specific tools to enhance understanding of curriculum content (e.g., interactive manipulatives, simulation software, electronic books, etc.).	I	D	D	D
3.3 Communication & Collaboration	K	1	2	3
K-2: 3.31 Use a variety of age-appropriate technologies (e.g., drawing program, graphic organizer, presentation software) to communicate, exchange ideas, and illustrate concepts.	I	D	D	D
K-2: 3.32 Communicate interactively with other students and other classes using appropriate technology.	I	D	D	D

Iroquois Central Technology Standards

Intermediate Grade Level 4 - 5 - Technology Exploratory Skills and Expectations

By the end of fifth grade, all students should have had the opportunity to become familiar with the tools they will be expected to use with proficiency later on. Through this exposure, they will have gained a positive view of computers as tools for learning. For example, electronic sources such as multimedia encyclopedias and teacher-previewed web sites can be used to gather information for a report. Additionally, there are many developmentally appropriate applications for children: interactive books, graphic organizers, and writing assistants, as well as mathematical and scientific tools. Such tools can enhance learning for all children, including those with disabilities; for example, multimedia reading software reinforces literacy skills by providing visual and auditory feedback to early readers. These tools can be integrated appropriately in an effective lesson plan.

1. Basic Operations and Productivity Tools

Grade

Continue to address earlier skill as needed.

		<i>I = Introduce</i> <i>D = Develop</i> <i>M= Master</i> <i>E= Extend</i>	
1.1 Basic Operations		4	5
G3-5: 1.11 Demonstrate proper care in the use of hardware, software, and peripherals.		E	E
G3-5: 1.12 Recognize, explain, and use basic input and output devices and other peripherals (e.g. digital cameras and printers, etc.).		E	E
G3-5: 1.13 Select a printer, use print preview, and print a document with the appropriate page setup and orientation.		E	E
G3-5: 1.14 Use basic accessibility features of computers and software (e.g., text-to-speech, variable font sizes).		M	E
G3-5: 1.15 Use various operating system features (e.g., opening more than one application/program, working with menus, using the taskbar/dock).		D	m
G3-5: 1.16 Demonstrate intermediate keyboarding skills and proper keyboarding techniques.		D	M
1.2 Word Processing/Desktop Publishing		4	5
G3-5: 1.21 Copy and paste text and images from one document to another.		<i>E</i>	E
G3-5: 1.22 Use menu/tool bar functions in a word processing program (i.e., font size/style, line spacing, and margins) to format, edit, and print a document.		M	E
G3-5: 1.23 Proofread and edit writing using appropriate resources (dictionary, spell-checker, grammar resources).		M	e
G3-5: 1.24 Import/insert text, graphics, tables, and files into word processing documents.		M	E
1.3 Database		4	5
G3-5: 1.31 Be able to define the term “database” and provide examples from everyday life (e.g., a geographic map, library catalogues, table of contents, book indexes), and identify potential and common uses of		E	E

databases.			
G3-5: 1.32 Be able to define database terms, such as “record,” “field,” and “search.”		E	E
<i>1.4 Spreadsheet</i>		4	5
G3-5: 1.41 Demonstrate an understanding of the spreadsheet as a tool to report, organize, and graph information.		E	E
G3-5: 1.42 Identify and explain spreadsheet terms and concepts (i.e., cell, column, row, values, labels, chart, graph).		E	E
G3-5: 1.43 Identify, discuss, and explore how spreadsheets are used to calculate and graph in a variety of settings (e.g., schools, government, business, industry, scientific research labs).		M	E
G3-5: 1.44 Identify and discuss how data are collected (data mining).		D	D
<i>1.5 Internet, Networking, and Online Communication</i>		4	5
G3-5: 1.51 Explain and use age-appropriate online tools and resources (e.g. tutorial, assessment, web browser).		E	E
G3-5: 1.52 Save and retrieve files on a hard drive or school network.		E	E
G3-5: 1.53 Manage and maintain (i.e., create and delete) electronic files on a hard drive or school network.		E	E
G3-5: 1.54 Recognize, access, and use local storage devices or network servers using correct terms (i.e., username, password, network, file server).		E	E
G3-5: 1.55 Identify and use Internet terms (i.e. web browser, URL, keyword, World Wide Web, search engine, links).		E	E
G3-5: 1.56 Identify and describe collaborative tools (e.g., email, online discussion forums, videoconferencing, wikis).		E	E
G3-5: 1.57 Use age-appropriate Internet-based search engines to locate information, selecting appropriate keywords.		M	E
<i>1.6 Multimedia and Software Applications</i>		4	5
G3-5: 1.61 Identify the components of an electronic slide show or multimedia presentation (i.e., title, text, graphics, sound, video, animation).		E	E
G3-5: 1.62 Insert, edit, and format text on a slide. Copy/paste or import graphics, and change their size and position on a slide.		E	E

G3-5: 1.63 Create a series of slides and organize them to present research or convey an idea.		E	E
G3-5: 1.64 Use painting and drawing applications to create products and edit work.		E	E

Iroquois Central Technology Standards			
Grades 3 through 5 – Technology Standards and Expectations			
2. Ethics, Society and Safety	Grade		
	<p><i>Continue to address earlier skill as needed.</i></p> <p><i>I = Introduce</i></p> <p><i>D = Develop</i></p> <p><i>M= Master</i></p> <p><i>E= Extend</i></p>		
2.1 Ethics		4	5
G3-5: 2.11 Explain and demonstrate compliance with school rules (Acceptable Use Policy) regarding responsible use of computers and networks (e.g., careful use of equipment, respect for other people’s work, and appropriate collaborative behavior).		E	E

G3-5: 2.12 Explain responsible, safe and ethical uses of technology and digital information (e.g., Internet resources, computers, digital cameras, mobile phones, handheld computers, wireless connectivity), and describe possible consequences of inappropriate use.		E	E
G3-5: 2.13 Explain Fair Use Guidelines for the ethical use of copyrighted materials (e.g., text, images, music, video, written materials, etc.) in multimedia projects and presentations.		D	M
G3-5: 2.14 Explain that some websites may include sponsored commercial links.		E	E
2.2 Society		4	5
G3-5: 2.21 Identify ways in which technology is used in the workplace and in society.		M	E
G3-5: 2.22 Identify and demonstrate the use of technology to support communication (e.g., with peers, family, school personnel).		E	E
G3-5: 2.23 Work independently as well as collaboratively with a partner or group, face-to-face or online.		E	E
2.3 Health and Safety		4	5
G3-5: 2.31 Recognize and describe the potential risks and dangers associated with various forms of online communications, including blogs, chat rooms, personal web pages, photo-sharing, and social networking.		M	E
G3-5: 2.32 Demonstrate safe email practices and appropriate email etiquette (if the district allows student email use).		M	E
G3-5: 2.33 Recognize, explain, and demonstrate ergonomically sound and safe use of equipment.		E	E
G3-5: 2.34 Identify and explain the strategies used for the safe and efficient use of computers, (e.g., passwords, virus protection software, spam filters, popup blockers) in order to keep them free from viruses, intrusion, and vandalism.		D	M
G3-5: 2.35 Explain the potential problems posed by computer viruses and reasons why students must exercise caution in opening email attachments.		D	M
Iroquois Central Technology Standards			
Grades 3 through 5 – Technology Standards and Expectations			
3. Research, Problem Solving and Communications		Grade	

	Continue to address earlier skill as needed. I = Introduce D = Develop M= Master E= Extend	
3.1 Research	4	5
G3-5: 3.11 Download and organize content from digital media collections for specific purposes, citing sources.	D	M
G3-5: 3.12 Use online collaborative tools (e.g., email, online discussion boards, blogs, wikis, and other collaborative tools) to gather information and collaborate on projects with other students.	D	M
G3-5: 3.13 Evaluate Internet resources using criteria for usefulness, authenticity, authority, value, absence of bias, and prejudice.	D	D
G3-5: 3.14 Perform basic queries on databases (e.g., library card catalogue, encyclopedia) and, using two or more criteria, locate, organize, and report information.	M	E
G3-5: 3.15 Use content-specific technology tools (e.g., environmental probes, sensors, measuring devices, simulations) to enhance understanding of curriculum content.	M	E
3.2 Problem Solving	4	5
G3-5: 3.21 Enter data into spreadsheets, create graphs, and do basic calculations to make predictions, solve problems, draw conclusions and communicate those conclusions.	M	E
G3-5: 3.22 Use appropriate technology tools to define a problem, propose hypotheses, validate information, test conclusions, and present findings and proposed solutions.	M	E
3.3 Communication	4	5
G3-5: 3.31 Determine the most effective format for communicating the results of problem-solving activities (e.g., desktop publishing program, multimedia presentations, graphic organizers, charts, graphs, and web pages).	M	E
G3-5: 3.32 Create projects that use writing and various forms of graphic sources (e.g., photographs, digital images, clip art, graphs, and tables)	E	E

with proper citations to communicate an idea; explain the rationale behind each design choice.			
G3-5: 3.33 Develop and use guidelines to evaluate multimedia presentations for organization, content, design, presentation, and appropriate use of citations.		M	E
G3-5: 3.34 Communicate interactively with other students and other classes using appropriate technology, including email if the district allows it.		D	M

Iroquois Central Technology Standards

Middle Level Grades 6 through 8 – Technology Standards and Expectations

By the completion of eighth grade, students should demonstrate competencies in using tools such as word processing, database, spreadsheet, web browser, presentation, and graphics applications. Students should be familiar enough with the purpose and function of these technologies to enable them to select the appropriate tool for a task. Students should be able to identify various components of a computer system and be able to explain basic concepts of networking including social bookmarking. Students should practice good file management skills and operate peripheral equipment independently.

Students should understand the legal, ethical, and safety issues concerning the use of email, the Internet, and other online tools. Students should understand how to protect their personal identification and information on the Internet and be knowledgeable about general rules for safe Internet practices. In addition, students should develop an awareness of how they present themselves on the Internet.

By the end of eighth grade, students should have had ample opportunity to use technology tools for research, problem solving, and communication across all curriculum areas. They should know how to communicate their learning with peers and other audiences through multimedia presentations, desktop-published reports, other electronic media, and web-based read / write tools. They should have learned effective strategies of digital literacy for locating and validating information on the Internet. Moreover, students should understand why it is important to use multiple web sites for their research, rather than relying on a single site for information.

In summary, when students enter the ninth grade, they should begin to realize the use of technology can impact the manner in which they able learn. Technology should be incorporated into their everyday individual and group learning experience, both inside and outside the classroom.

1. Basic Operations and Productivity Tools

Grades

Continue to address earlier skill as needed.

I = Introduce

D = Develop

M= Master

E= Extend

<i>1.1 Basic Operations</i>	<i>6</i>	<i>7</i>	<i>8</i>
G6-8: 1:11 Identify and use the basic features of a computer operating system to access information on the size and format of a file and to create folders on a local hard drive.	M	E	E
G6-8: 1.12 Identify successful troubleshooting strategies for minor hardware and software issues/problems.	M	E	E
G6-8: 1.13 Select a printer and print a document with the appropriate page setup and orientation.	E	E	E
G6-8: 1.14 Operate peripheral equipment (e.g., scanner, digital camera, camcorder), if available in the school.	M	E	E
G6-8: 1.15 Demonstrate keyboarding techniques that result in accuracy, speed, and general efficiency in computer operation. (For students with disabilities, demonstrate alternate input techniques (e.g., word prediction software, specialized keyboards, and mouse alternatives.)	E	E	E
G6-8: 1.16 Identify and use a variety of information storage media (i.e., CDs, DVDs, flash drives, school servers, and online storage spaces), and provide a rationale for using a certain medium for a specific purpose.	D	M	E
<i>1.2 Word Processing/Desktop Publishing</i>	<i>6</i>	<i>7</i>	<i>8</i>
G6-8: 1.21 Demonstrate use of intermediate features in word processing applications (e.g., tabs, indents, line spacing, headers and footers, end notes, bullet and numbering, tables, symbols/special characters).	M	E	E
<i>1.3 Database</i>	<i>6</i>	<i>7</i>	<i>8</i>
G6-8: 1.31 Describe the structure and function of a database, using related terms appropriately (e.g., record, field, query, reports, layout, format, tags, keywords, etc.).	M	E	E
G6-8: 1.32 Create a simple database, defining field formats and adding new records.	M	E	E
G6-8: 1.33 Perform simple operations in a database (i.e., browse, sort, filter, search on selected criteria, delete data, and enter data).	M	E	E
G6-8: 1.34 Plan and develop database reports to organize and display information.	D	M	E
<i>1.4 Spreadsheet</i>	<i>6</i>	<i>7</i>	<i>8</i>
G6-8: 1.41 Create an original spreadsheet, entering simple formulas.	M	E	E

G6-8: 1.42 Produce simple charts and graphs from a spreadsheet.	M	E	E
G6-8: 1.43 Describe the structure and function of a spreadsheet, using correct terminology (i.e., cells, rows, columns, and formulas).	M	E	E
G6-8: 1.44 Distinguish among different types of charts and graphs (e.g., bar graphs, circle graphs, line graphs), and choose the most appropriate chart/graph to represent given data.	I	D	M
G6-8: 1.45 Describe the use of spreadsheets to calculate, graph, organize, and present data in a variety of settings (e.g., universities, government, business, industry).	M	E	E
G6-8: 1.46 Apply advanced formatting features to customize tables, charts, and graphs.	I	D	M
<i>1.5 Internet, Networking, and Online Communication</i>	6	7	8
G6-8: 1.51 Identify and use correct terminology to explain common terms associated with the Internet (e.g. browser, search engine, URL, hyperlink, site map).	M	E	E
G6-8: 1.52 Add and organize bookmarks/favorites on a web site for future reference.	M	E	E
G6-8: 1.53 Identify probable types and locations of web sites by examining their domain names (e.g., .edu, .com, .org, .gov, .au).	M	E	E
G6-8: 1.54 Use email functions and features including replying, forwarding, attachments, subject lines, signature, and address book. (Use of e-mail is at district discretion and may be a class-wide activity if students do not have individual accounts.)	M	E	E
G6-8: 1.55 Recognize, explain, and correctly use terms related to networks (LANs, WANs, servers, and routers), Internet connectivity (DSL, T1, T3), and online learning (e.g., IP address, post, thread, Intranet, discussion forum, drop box, account, password).	D	M	E
<i>1.6 Multimedia and Software Applications</i>	6	7	8
G6-8: 1.61 Use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products.	M	E	E
G6-8: 1.62 Demonstrate knowledge by creating a multimedia presentation utilizing appropriate media (e.g. audio, video, animations, etc.).	D	M	E

Iroquois Central Technology Standards			
Middle Level Grades 6 through 8 – Technology Standards and Expectations			
2. Ethics, Society, and Safety	Grades		
	<i>Continue to dress earlier skill as needed.</i> <i>I = Introduce</i> <i>D = Develop</i> <i>M= Master</i> <i>E= Extend</i>		
2.1 Ethics	6	7	8
G6-8: 2.11 Explain and demonstrate ethical and legal behavior in copying files, applications, and media.	M	E	E
G6-8: 2.12 Explain how media and technology can be misused to distort or exaggerate information.	M	E	E
G6-8: 2.13 Explain how Copyright Law protects the ownership of intellectual property, and explain consequences of violating the law.	M	E	E
G6-8: 2.14 Explain issues of privacy, security, copyright, plagiarism, spam, viruses, file sharing, passwords, and personal information.	M	E	E
G6-8: 2.15 Explain fair use guidelines for using copyrighted materials (e.g. images, music, video, text) in school projects, as well as consequences of misuse.	M	E	E
G6-8: 2.16 Evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness.	D	M	E
2.2 Society	6	7	8
G6-8: 2.21 Identify and discuss the technology proficiencies needed in the workplace and how students can prepare themselves to meet these demands.	M	E	E
G6-8: 2.22 Identify and describe the effect technological changes have had on business, transportation, communications, industry, and agriculture in a global society.	M	E	E
G6-8: 2.23 Explain how technology can support communication and	M	E	E

collaboration, personal and professional productivity, and lifelong learning.			
G6-8: 2.24 Demonstrate the use of technology to identify and explore various occupations or careers.	D	M	E
G6-8: 2.25 Explain and demonstrate the use of technology to support communication (e.g., with peers, family, school personnel) and compare it with other ways of communicating.	M	E	E
G6-8: 2.26 Explain various ways that consumers use technology (e.g., creating budgets, making purchases, conducting financial transactions, and accessing product information).	D	M	E
2.3 Health and Safety	6	7	8
G6-8: 2.31 Explain why computers, networks, and information must be protected from viruses, intrusion and vandalism.	M	E	E
G6-8: 2.32 Demonstrate knowledge of responsible, safe, and ethical use of networked digital information (i.e., Internet, mobile phones, wireless, LANs).	M	E	E
G6-8: 2.33 Demonstrate knowledge of the potential risks and dangers associated with online communications. Provide examples of safe and unsafe practices for sharing personal information via e-mail and the Internet.	M	E	E
G6-8: 2.34 Demonstrate an understanding of terms/concepts associated with the safe, effective, and efficient use of telecommunications/Internet (i.e., password, firewalls, spam, security, Acceptable Use Policy).	M	E	E

<p>Iroquois Central Technology Standards</p> <p>Middle Level Grades 6 through 8 – Technology Standards and Expectations</p>	
<p>3. Research, Problem-Solving, and Communications</p>	<p>Grades</p> <p><i>Continue to address earlier skill as needed.</i></p> <p><i>I = Introduce</i></p> <p><i>D = Develop</i></p> <p><i>M = Master</i></p> <p><i>E = Extend</i></p>

<i>3.1 Research</i>	6	7	8
G6-8: 3.11 Collect, organize, and analyze digital information from a variety of sources (e.g. survey data, data gathered online, data from science experiments).	M	E	E
G6-8: 3.12 Use content-specific technology tools (e.g., environmental probes, sensors, measuring devices, simulations) to enhance understanding of curriculum content.			
<i>3.2 Problem Solving</i>	6	7	8
G6-8: 3.21 Use a variety of computing devices (e.g. handheld computers, digital cameras, scanners) to collect, analyze and present information for curriculum assignments.	M	E	E
G6-8: 3.22 Use and modify databases and spreadsheets to organize, analyze, interpret, and evaluate findings.	M	E	E
G6-8: 3.23 Develop guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects.	D	M	E
<i>3.3 Communication</i>	6	7	8
G6-8: 3.31 Demonstrate knowledge of the advantages of using a specific technology (e.g., word processing, desktop publishing, presentation software) to develop and communicate information to a variety of audiences.	M	E	E
G6-8: 3.32 Identify and demonstrate differences between writing and design of print and screen media (e.g., font size, aspect ratio, resolution). Explain some of the difficulties associated with the repurposing of information across several distinct media.	M	E	E
G6-8: 3.33 Use a variety of telecommunication tools (e.g., e-mail, discussion groups, web pages, blogs, web conferences) synchronously and/or asynchronously to collaborate and communicate with peers, experts, and other audiences (at district’s discretion).	I	D	D
G6-8: 3.34 Plan, design, and develop a multimedia product using information (e.g., text, graphics, charts) to present research findings in the most effective way, citing sources.	D	M	E

Iroquois Central Technology Standards

High School Level Grades 9 through 12 – Technology Standards and Expectations

Throughout high school, as students take courses to prepare themselves for college and the working world, they should acquire increasingly sophisticated technology skills. Depending on the pathways and courses they choose to take, high school students will become more adept with certain technology tools than others. Moreover, as the curriculum demands more complicated learning tasks, students will discover advanced capabilities in tools such as database and spreadsheet applications.

During high school, students also should have the opportunity to use more specialized technology tools that enhance their learning. These might include simulation software, geographic information systems, computer-aided design software, or any of a wide variety of content-specific tools. In addition, students should have the opportunity to learn how to write code in a commonly used programming language.

By the completion of high school, students should have developed an appreciation for the capabilities of technology resources, as well as an understanding of how these tools can be used for lifelong learning. In addition, students should be knowledgeable about the role technology plays in various fields of work, enabling them to better plan for their careers in the 21st century.

1. Basic Operations and Productivity Tools

1.1 Basic Operations

G9-12: 1.11 Identify the platform, version, properties, function, and interoperability of computing devices.

G9-12: 1.12 Explain differences between formats that are open specification and proprietary, giving situations in which one is more appropriate than the other.

G9-12: 1.13 Install and uninstall software; compress and expand files (with district's permission).

G9-12: 1.14 Resolve commonly occurring error messages and simple hardware and software problems as they occur (e.g., frozen screen, disk error, printing problems).

G9-12: 1.15 Use online help and other support to learn about features of hardware and software, as well as to assess and resolve problems.

G9-12: 1.16 Demonstrate skills for evaluating appropriate hardware and software (e.g., features, versions, capacity) for a given task.

G9-12: 1.17 Demonstrate effective backup and recovery strategies.
G9-12: 1.18 Identify the capabilities and limitations of emerging technologies.
1.2 Word Processing/Desktop Publishing
G9-12: 1.21 Save, retrieve, load, and import a word processing document in different file formats (e.g., RTF, HTML).
G9-12: 1.22 Import, export, and link data between word processing documents and other applications.
G9-12: 1.23 Apply advanced formatting and page layout features when appropriate (e.g., columns, templates, and styles) to improve the appearance of documents and materials.
G9-12: 1.24 Use special features appropriately (e.g., footnotes, track changes, insert comments, search and replace, keyboard shortcuts).
G9-12: 1.25 Identify the use of word processing and desktop publishing skills in various careers.
1.3 Database
G9-12: 1.31 Describe the importance of designing the structure of a database to meet its intended goals.
G9-12: 1.32 Duplicate the structure of a database without data.
G9-12: 1.33 Use database features to create mailing labels, form letters, and perform mail merges.
G9-12: 1.34 Save database files in various formats.
G9-12: 1.35 Manipulate non-alphanumeric digital data (e.g., geospatial data from MassGIS ³ , images, audio) within a database.
G9-12: 1.36 Identify the use of database skills in various careers.
G9-12: 1.37 Define the term “metadata,” and explain how metadata describes the structure and workings of an organization's use of information.
1.4 Spreadsheet
G9-12: 1.41 Define and use functions of a spreadsheet application (e.g., sort, filter, find).
G9-12: 1.42 Enter formulas and functions; use the auto-fill feature in a spreadsheet application.
G9-12: 1.43 Explain and use advanced formatting features of a spreadsheet application (e.g., reposition columns and rows, add and name worksheets).

G9-12: 1.44 Use various number formats (e.g., scientific notation, percentages, exponents) as appropriate.
G9-12: 1.45 Differentiate between formulas with absolute and relative cell references.
G9-12: 1.46 Customize formatting of charts or graphs created in spreadsheet applications.
G9-12: 1.47 Use multiple sheets within a workbook, and create links among worksheets.
G9-12: 1.48 Import and export data between spreadsheets and other applications.
G9-12: 1.49 Create and use pivot tables.
G9-12: 1.410 Identify the use of spreadsheet skills in various careers.
1.5 Internet, Networking, and Online Communication
G9-12: 1.51 Explain how to select and use search engines and online directories. Explain the differences among search engines and how they rank results.
G9-12: 1.52 Explain the differences between searching and browsing a collection of data, identify when one technique is more appropriate than the other, and explain how the two can work together.
G9-12: 1.53 Explain and demonstrate effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).
G9-12: 1.54 Describe good practices for password protection and authentication.
G9-12: 1.55 Complete at least one online credit or non-credit course or tutorial; discuss the benefits and disadvantages of this method of learning.
G9-12: 1.56 Plan and implement a collaborative project using telecommunications tools with students in other classrooms and schools (e.g., email, discussion forums, groupware, interactive web sites, and videoconferencing).
G9-12: 1.57 Demonstrate basic understanding of addressing schemes (i.e., IP addresses, DHCP, DNS).
G9-12: 1.58 Identify career options in network technologies.
G9-12: 1.59 Present data to multiple audiences using the most appropriate tools (e.g., spreadsheet, database, graphing, and concept-mapping tools).
G9-12: 1.510 Explain how various formatting options are used to convey information when formatting of charts or graphs created in spreadsheet applications.
1.6 Multimedia and Software Applications
G9-12: 1.61 Identify technology tools (e.g., authoring tools and other software resources) that can be used to create a multimedia product.

G9-12: 1.62 Compare differences between multimedia, hypertext, and static media; classify everyday items (e.g., DVDs, web sites, household appliances, books, posters) according to their use of multimedia, hypertext, and static presentations.

G9-12: 1.63 Demonstrate the ability to use a variety of applications to plan, create, and edit multimedia products (e.g., slide presentations, videos, animations, simulations, pod casts).

G9-12: 1.64 Identify career options in multimedia and software applications.

G9-12: 1.65 Link multiple pieces of information residing in different applications (e.g., linking a chart in a word-processing document to the spreadsheet where it was created, so that the chart is automatically updated when data are changed in the spreadsheet).

1.7 Web Authoring

G9-12: 1.71 Understand terminology necessary for web page authoring (e.g., HTTP, HTML, tags, links, browsers, plug-ins, web servers).

G9-12: 1.72 Distinguish between effective and ineffective designs in web sites.

G9-12: 1.73 Use text, images, design elements, and media effectively to create unified, well organized sites with effective navigation.

G9-12: 1.74 Use HTML or web-authoring tools to create and edit web pages (e.g., add/edit text, graphics, links, and buttons).

G9-12: 1.75 Demonstrate an understanding of practices that contribute to a web site's accessibility to people with disabilities (e.g., tab order, keyboard equivalents, clear navigation mechanisms, alt tags describing images, captioning for multimedia).

G9-12: 1.76 Create and save web pages using appropriate file structure; upload and publish web pages.

G9-12: 1.77 Understand how to test and debug web files for quality assurance.

G9-12: 1.78 Identify career options in web design, development, and management.

Expectations
2. Ethics, Society, and Safety
<i>2.1 Ethics</i>
G9-12: 2.11 Demonstrate compliance with the school's Acceptable Use Policy.
G9-12: 2.12 Explain laws restricting the use of copyrighted materials.
G9-12: 2.13 Demonstrate the ability to evaluate the authenticity, accuracy, appropriateness, and bias of electronic resources, including web sites.
G9-12: 2.14 Identify examples of plagiarism, and discuss the possible consequences of plagiarizing the work of others.
G9-12: 2.15 Write correct in-text citations and reference lists for text and images gathered from electronic sources, as stated in the Massachusetts English Language Arts Framework.
G9-12: 2.16 Discuss and demonstrate issues related to acceptable and responsible use of technology (e.g. privacy, security, copyright).
G9-12: 2.17 Discuss misuse of technology for personal and commercial reasons (e.g., spam, viruses, personal identity and information theft); discuss related consequences and possible solutions.
G9-12: 2.18 Understand the appropriate and responsible use of communication tools such as chats, instant messaging, blogs, and wikis.
<i>2.2 Society</i>
G9-12: 2.21 Design and implement a personal learning plan that includes the use of technology to support lifelong learning goals.
G9-12: 2.22 Analyze the effect of technological change on areas such as business, transportation, communications, industry, agriculture, and the arts, both locally and globally.
G9-12: 2.23 Explain the penalties for illegal practices such as software piracy, unauthorized file sharing/downloading, virus spreading, and hacking.
<i>2.3 Health and Safety</i>
G9-12: 2.31 Evaluate school and work environments in terms of ergonomically sound practices.
G9-12: 2.32 Demonstrate ways that individuals can protect their technology systems from unethical or unscrupulous users.

G9-12: 2.33 Explain the use of appropriate protective technologies (e.g. firewalls and virus protection software).
G9-12: 2.34 Describe and use safe and appropriate practices when participating in online communities, such as discussion groups, blogs, and social networking sites.
G9-12: 2.35 Explain and use practices to protect one's personal safety online (e.g., not sharing personal information with strangers, being alert for online predators, and reporting suspicious activities to parents, teachers, or law enforcement personnel).

<p>Iroquois Central Technology Standards</p> <p>High School Level Grades 9 through 12 – Technology Standards and Expectations</p>
3. Research, Problem-Solving, and Communications
<i>3.1 Research</i>
G9-12: 3.11 Compare, evaluate, and select appropriate online tools to locate information and conduct research using all appropriate electronic resources (e.g., web sites, online periodical databases, online catalogs, search engines, specialized directories, RSS feeds, and email alerts).
G9-12: 3.12 Formulate a research question or hypothesis, use appropriate technology resources to collect relevant information, analyze the findings, and report the results.
<i>3.2 Problem Solving</i>
G9-12: 3.21 Explain and demonstrate how specialized technology tools can be used for problem solving, decision-making, and creativity (e.g. simulation software, environmental probes, computer-aided design, geographic information systems, dynamic geometric software, graphing calculators, art and music composition software).
<i>3.3 Communication</i>
G9-12: 3.31 Present information using a variety of media (e.g., reports, research papers, presentations, newsletters, web sites, pod casts, blogs).
G9-12: 3.32 Present ideas using a variety of formats that are appropriate for various audiences.
G9-12: 3.33 Use online communication tools such as bulletin boards, discussion forums, listservs, and web conferencing to collaborate with peers, community members, and field experts when appropriate.

- 1 The Partnership for 21st Century Skills (<http://www.21stcenturyskills.org/index.php>) is a tax-exempt 501 (c) 3 organization that includes approximately 26 member organizations. The Partnership's original work was supported by a two-year grant from the U.S. Department of Education.
- 2 Boston Globe, February 28, 2007
http://www.boston.com/news/globe/editorial_opinion/oped/articles/2007/02/28/tough_choices_in_education/
- 3 For more information, see MassGIS's web page, GIS in Education at <http://www.mass.gov/mgis/gisedu.htm>.
4. National Educational Technology Standards (<http://www.iste.org/inhouse/nets/cnets/index.html>)
5. Madison Metropolitan School District <http://danenet.wicip.org/mmsd-it/tlc/sba.html>
6. School District of Lodi
http://www.lodi.k12.wi.us/Curriculum/Standards_Benchmarks_9_12.htm(http://www.lodi.k12.wi.us/Curriculum/Standards_Benchmarks_9_12.htm)
7. Alabama Best Practices Center (<http://www.bestpracticescenter.org/21stcentury.htm>)

Section I-C – Technology Delivery
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In keeping with the mission of the Iroquois Central School District, this school is committed to provide students a visionary educational program, which will produce individuals who adapt to, and show concern for an ever-changing world. Iroquois is committed to graduating students who possess the skills needed to succeed in an increasingly complex, ever changing information society. As technology evolves and information becomes more readily available, the ability to process and manipulate information has become the single most important determinant of economic success for individuals as well as nations. As technologies continue to afford a greater educational opportunity than ever before, the ability to gather, analyze, and distribute information through electronic communication is vital. Therefore, Iroquois Central School District's vision is to graduate students who are comfortable with and proficient in using basic operating systems, in an ethical, productive, and effective manner. Our program calls for the education of three fundamental platforms of technology: Office Based Technologies; Social Networking Technologies, Collaborative Technologies, and Folksonomies.

The Office Based Technology (OBT) platform includes those technologies that assist functioning within the traditional technology work environment. These OBTs include such programs as word documents, power point, spread sheets, and other formats that help students function in the traditional technology mediums that have existed for decades. OBTs have traditionally increased student productivity affording information editing and storage as well as a means to publish research and data.

The Social Networking Technology (SNT) platform includes technologies that assist students in developing online communities. These communities include web-based blogs, wikis, web-hosting photo sites, and podcasting that extend beyond the traditional

barriers of geography. This platform engages students in the read/write web, promoting social and ethical standards of behavior in a diverse global climate, producing web-based publications that have the potential to interact with the entire web, and develops an intellectual exchange amongst a social network that focuses on critical thinking and thought development from a diverse and global perspective, building a more informed problem solver and decision maker.

The Collaborative Technology (CT) platform includes technologies that enhance student collaborative opportunities, breaking traditional geographic and scheduling hurdles that have long constrained collaboration. These CTs include web-based technologies like vview, skype, and other forms of technologies allowing students to productively interact with peers, professionals, and experts. These tools promote a social and ethical academic environment that leverages the other three platforms in a uniquely collaborative manner, preparing students for the real world environment of telecommunications, the creative workplace, and multiple audiences.

As individuals progress through their academic experience at Iroquois, they will be exposed to an age/grade appropriate learning environment that utilizes multiple technology platforms to facilitate a more engaging, enriching, and dynamic educational experience. The Iroquois Central School District Educational Technology Plan will address each of the platforms described above with grade-level specificity.

Section I-D – Parental Communications & Community Relations
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Teachers will utilize parent/teacher conferences to share new information relating to hands-on learning, enabling parents to stimulate learning through the creation of suitable home-study environments. Teachers at the Iroquois CSD use events, such as Open Houses and Parent Conferences to demonstrate the technological skills they will be developing over the course of the year with their students such as using PowerPoint Presentations using the new data projectors (K-5). With adequate professional development and support services, teachers will be able to cultivate skills in students that they will use in real world applications. By sharing projects with parents, teachers will be able to seek and provide appropriate learning environments for their students outside of the classroom.

The Iroquois CSD also communicates effectively with the community to develop positive attitudes toward the educational process and its end results. Within this framework, the cooperative efforts of the family, the community, and the institution will culminate in a learner who will be competitive and successful in our constantly changing global society. The district operates a Continuing Education Program for the community. Computer classes are offered during Fall, Spring, and Summer sessions.

The use of the Webs That Work school web site program through the Western New York Regional Information Center (WNYRIC) allows continuous communication to staff,

students, parents and guardians on District issues. Teacher web pages allow students to access homework assignments, spelling lists, links to educational support sites as well as access to on-line services such as Brain Pop and Castle Learning. The District Technology Plan, once approved by state and local sources, will be posted to the District web site for ease of access to the public as well as staff and students.

An extensive set of phone and emergency contact lists allow the district to send out blanket statements and updates to all constituents or in a building by building basis. The program known as ConnectEd allows administration to record messages and updates and send out a pre-recorded message (such as in the case of updates on the H1N1 Flu or Swine Flu issue).

The Iroquois Central School District enjoys a high level of parent and community involvement. Residents participate in Site Based Management Teams, volunteer programs and school advisory committees. Parents and community members participate in monthly meetings with the Superintendent and are encouraged to attend board of education meetings. The Board of Education stresses the importance of shared-decision making at all levels of district operation.

The use of the Webs That Work school web site program through the Western New York Regional Information Center (WNYRIC) allows continuous communication to staff, students, parents and guardians on District issues. Teacher web pages allow students to access homework assignments, spelling lists, links to educational support sites as well as access to on-line services such as Brain Pop, Castle Learning, Lead 21, IXL Math, and Envisions Math. The District Technology plan, once approved by state and local sources, will be posted to the district web site for ease of access to the public as well as staff and students.

An extensive set of phone and emergency contact lists allow the district to send out blanket statements and updates to all constituents or by building. The program known as ConnectEd allows administration to record messages and updates and send out a pre-recorded message (such as in the case of updates on health issues).

The Iroquois Central School District enjoys a high level of parent and community involvement. Utilization of the Parent Portal with grades 6-12, residents participate in Site Based Management Teams, volunteer programs and school advisory committees. Parents and community members participate in monthly meetings with the Superintendent and are encouraged to attend Board of Education meetings. The Board of Education stresses the importance of shared-decision making at all levels of district operation.

Section I-E – Collaboration

The Iroquois Central School District offers two sessions (fall and winter) of Adult Community Education. In some cases, the classes offered usually cover topics of computer basics and need technology such as computers, monitors, printers, and data projectors. The Community Education Office of Iroquois Central Schools coordinates

with the Iroquois Technology Department to ensure that computer labs are available and have the needed internet access and software for the classes to be provided. As most of these classes are considered basic level for internet access, e-mail and Microsoft Office products training all campus computer labs meet the technical specifications of the instructors and course catalog. At this time, the Iroquois Central School District does not provide or have a partnership with any classes dealing with GED diplomas and English as a Second Language.

Section II-F – Professional Development
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The overall purpose of the Professional Development Plan of the Iroquois Central School District is to incorporate, implement, and foster concepts, skills, and attitudes from the best educational practices and research. Priority will be given to activities that promote growth for the individual, the school, and the entire district. In this context, the purpose of the Iroquois Professional Development Plan seeks to improve the quality of teaching and learning as well as to ensure teacher participation in substantial professional development.

Technology-based professional development activities will enhance student learning enabling students to improve their performance on the new state assessments. Computer hardware and software and computer/calculator-based laboratory devices will provide teachers and students with the fundamental tools needed to achieve these higher standards in all content areas. The Professional Development Committee will continue to coordinate professional development programs, hosting field study projects with students, and utilizing School-To-Work and Career Development/Occupational Studies Programs as bridges between vocational and academic learning. The Iroquois CSD is committed to improving the use of technology, making it accessible to all students and expanding its use in the classroom.

In order to make informed decisions and to address real-life problems, students must apply the knowledge and critical thinking skills they glean from enhanced instructional practices in all content areas, including technology. But this learning standard cannot be realized without first training the educators in the use of this equipment.

Objectives of the New York State Education Department's *Learning Standards* include the basic premise that all high school graduates will be prepared for college, work, or both. All of the districts in the consortium have developed an internship program. For example, membership in the Erie County Tech Prep Consortium has provided teachers with the chance to develop curriculum that aligns Applied Mathematics courses to the MST Standards, with technology as the essential ingredient. Like most districts, Iroquois faces the challenge of keeping their educators trained in the use of technology, so that students will acquire a knowledge-base and skills that are necessary for higher education studies and the workplace.

Over the past three years, there has been an excess of 40% turnover of faculty. We need to readjust professional development timelines and offerings.

Most teachers, including new practitioners, have had little, if any training, in the use of specialized technological equipment. Using established college professors and staff developers to guide teachers in creating lesson plans and activities using technology will achieve the pre-service goals. Thus, teachers have concluded that if they are to affect real change, then the State's learning standards need support in their classroom. It was decided that student development and achievement should mirror professional development at the Iroquois CSD.

Integration of technology is closely aligned with training, as outlined in the Iroquois CSD Professional Development Plan (See Appendix A-2). The Iroquois CSD's strategies for the integration of professional development activities with the increased use of instructional technology are:

- relevant, meaningful and learner-based instructional practices (for students and teachers), as they relate to the NYS Learning Standards;
- on-going and consistent opportunities for learning and continuous improvement;
- demonstrations with supervised guidance, practice, feedback and self-reflection;
- staff development activities in a variety of formats to promote differentiated learning styles in and out of the classroom;
- self-directed and flexible with appropriate time for training;
- implementation of enhancement tools such as blogs, wikis, and podcasts.

The technology curriculum also provides them with varied experiences with computers. At the high school level, staff and students are offered a variety of courses using computers. These include programming courses, software exploration classes, research using the Internet, technology courses such as Computer Aided Design, business and graphic arts courses taught in existing labs, and eBusiness initiatives through the Academy of Finance. Classroom teachers at all levels now use computers for various lessons and activities as well.

The addition of mobile labs via laptop carts at the elementary level allows students and staff more access to resources. New mobile labs at the middle school provide teachers with portable access to technology to facilitate learning in the classroom.

School Island, a web-based program for Grades 3 - 12, enables staff and students to work at home or at school to gain more practice with material taught in the classroom. Brain Pop, another a web based program for Grades K-8, provide resources and materials to enhance classroom instruction and is available to all staff, parents, students and guardians.

Training for teachers and other staff will be coordinated through the Assistant Superintendent, in cooperation with the Director of Instructional Technology. Teacher training will be correlated with the requirements of the Professional Development Plan. Trainings will utilize multiple instructors in a variety of venues (i.e., teacher centers, consultants, individualized and small group instruction, distance learning, and

self-paced CA programs). Follow up to training activities will include, but not be limited to, an evaluation form being forwarded to participants two weeks after completion of classes.

The Common Set of Learning Objectives Program (CSLO) was integrated in the District. Teachers involved in the program increase their knowledge-base through technology-related workshops and share information with other teachers, in an effort to enhance the curriculum through the use of technology.

Action Plan for II-F Action Plan for Professional Development				
Goal: Provide Professional Development in Technology and Tech Integration				
Actions needed to achieve goal	Staff Development	Person(s) Responsible	Date each action will be Completed	Indication of Success
Provide teachers professional development in technology and technology integration (big picture)	Staff development days, grade level and department meeting trainings, CSLO and ECTC offerings to give ideas for integration, one on one instruction as needed from Director of Instructional Technology	Tech Committee, District Admin	As determined by staff development calendar for each year (example, staff days for 2013-2016 are Oct 8, Nov 4 2013, etc.) and workshop offerings from ECTC and CSLO	Proof of attendance and survey results as part of staff evaluations of trainings
Track Professional Development using PDP Premier	Opening Day training on how to request PD via the district catalog and requesting training	Asst Supt	September 7, 2013	Review of sign in log and demonstration by each teacher of requesting PD via PDP Premier
Refresher training on PDP Premier for teachers	During department meetings, grade level and staff meetings	Asst Superintendent will coordinate Building Admin to provide time for teachers to review the training in PDP	November 2013	Review of sign in log and demonstration by each teacher of requesting PD

		Premier		via PDP Premier, a survey will also be conducted after both training sessions to get feedback
Provide technology focused professional development	Using My Learning Plan local offerings as well as the WNYRIC CSLO catalog plus ECTC offerings will be added as part of the district catalog	Asst Superintendent will coordinate with CSLO, ECTC, Building Admin to create the catalog for the coming year	September 2013 (and each September for the following years)	Review of My Learning Plan program catalog
Ongoing and refresher training for PDP premier	Staff development days, grade level and department meeting trainings	Dir of Instructional Tech will coordinate with WNYRIC to provide ongoing training	Ongoing throughout the year	Proof of attendance and survey results as part of staff evaluations of trainings
Update and administer a technology survey to gauge the current skill levels of teachers and administrators	A brief overview and training for the survey will be conducted as part of Opening Day each year	Asst Supt and Director of Instructional Technology	September 7, 2013 (and future Opening Days)	Teachers will be given two weeks to finish the survey via the Schoolwires web site service

The Iroquois Central School District is currently revising its Technology Survey to gauge the current skill levels of teachers and administrators in areas related to hardware, software, Web 2.0 and integration into the curriculum. The current survey is no longer valid due to the switch from WinSchool Student Management System to eSchool Student Management System. The Tech Committee will be updating the survey for the beginning of the 2013-2016 school year during the month of September 2013 Please see the action plan above for further details. A PDF of the old survey is attached to this document.

Section II-G – Supporting Resources

To ensure the successful and integrated use of technology in the Iroquois Central School District many resources are utilized to address the shareholders in the technology process. Teachers, central office staff, administrators and support staff use the Webs That Work school web site service from the Western New York Regional Information Center to distribute calendar events, schedules, announcements, newsletters and

provide a single source of information for parents and students to obtain more information on pertinent social and academic topics like scholarships, graduation requirements and even H1N1 Swine Flu material. In addition, the district uses the eSchool Student Management System, a web-based program also from the WNYRIC that allows teachers and staff to enter grades, demographic, attendance, discipline and identification information on all current students. It is the intention of the district to utilize a feature within this program known as the Parent Portal to allow real time and updated information on student attendance, grades and discipline K-12 via the internet from home computers.

The district has implemented several guidelines and policy manuals to assist teachers, administrators, secretarial and support staff the necessary training and guidance when using technology to impart information on student progress or issues to parents and guardians. These items are in place to help provide a safe learning environment and can be used to discipline students who may violate our Acceptable Use Policy found on page 55 of this document. Some examples of these policies can be found below including

- ICSD Acceptable Use Procedure
- ICSD Acceptable Use Incident Form
- ICSD Children's Internet Protection Act Board Policy
- Student and Staff Acceptable Use Policy found on page 55 of this document

IROQUOIS CENTRAL SCHOOL DISTRICT ACCEPTABLE USE PROCEDURE FOR COMPUTERIZED INFORMATION RESOURCES AND TELECOMMUNICATION SYSTEMS

The District will make available a variety of technological resources to support learning and enhance instruction. The users (defined as any student, teacher, administrator, staff member, or community member utilizing the District's computer system, network, electronic mail systems, and telecommunication systems) take on certain responsibilities, including the use of technology and telephones in an ethical manner.

Ethical Guidelines for Acceptable Use of Computer Networks in Schools

We encourage the use of computers and technology within the District, however, with this privilege comes accountability. Violations of the following guidelines may result in a loss of access as well as other disciplinary or legal action. Users are expected to:

Respect the privacy of others:

- Users will keep their passwords confidential
- Users will not attempt to learn or use passwords of other users or network administrators
- Users will not attempt to gain unauthorized access to networked or stand-alone systems
- Users will not access another individual's folders, files, or work without permission
- Users will not modify or read files of other individuals; however, it should be noted that system administrators have access to all files. Privacy shall not be assumed in this case.
- Student data is confidential information. Employees who access students records from within or outside the district may not use, release, or share these records except as authorized by Federal and/or State law and/or board policy.

Respect the legal protection provided by copyright and license to programs and data:

- Users will follow all copyright laws
- Users will not make copies of licensed programs, in violation of copyright laws
- Users will not install their own software on district computers without authorization
- Users will not plagiarize the works of others.

Respect the integrity of the District networks, telecommunication system networks, and other networks to which we are connected:

- Users will not intentionally develop or use programs to harass others or infiltrate a computer system or damage or alter software components or network.
- Users will not intentionally send inappropriate, obscene or hateful messages/mail to others
- ***Users will not abuse computer or network hardware (i.e. mice, keyboards, printers, etc.)***
- ***Users will not use encryption programs on district computers without authorization.***

Respect the materials and resources of the District:

- ***Users will not download or play unauthorized, non-educational “games” on district computers***
- ***Users will not use the District’s computer resources, including printers, for activities not related to school programs and activities***
- ***Users will properly utilize computer time and will not waste limited supplies that are provided by the District***
- ***Access to computer resources and telecommunications should be primarily educational and professional development related activities.***

Respect the materials and resources of the Internet and network accounts:

- ***Users will not send offensive material over the Internet or on electronic mail***
- ***Users will not use obscene, offensive, harassing, insulting, or otherwise abusive language over the Internet or on electronic mail***
- ***Users will not employ the network for commercial purposes.***

Consequences of Violations

Suspected violations of acceptable use will be communicated to appropriate school personnel. Persons found to be in violation of acceptable use may be denied technology access on District equipment. Any determination of non-acceptable usage, serious enough to require disconnection, shall be promptly communicated to appropriate supervisory staff for further action.

For misuse/abuse of the District’s acceptable use policy, the following actions may include, but are not limited to the following:

- ***Users may lose or have access suspended/limited to specific technology equipment for a specified period of time***
- ***Users may lose or have access suspended/limited to specific telecommunication facilities***
- ***Users may lose or have access suspended/limited to network account privileges***
- ***Users may be required to make full financial restitution***
- ***Suspension, detention or even expulsion are possible outcomes of severe violations***
- ***Users could face prosecution if criminal activity is involved.***
- ***Use of the District’s technology is a privilege. Staff members failing to adhere to the District’s acceptable use and board policy may be subject to disciplinary action per board policy and the collective bargaining agreement.***

Liability

Use of the district computer equipment, Internet accounts, as well as networks and information contained on them is a privilege, not a right. While every reasonable effort will be

made by district personnel to provide Internet filters to block questionable materials, the user also must accept responsibility of ethical usage of District facilities.

Notification

All staff and students will be notified in writing and/or electronically of the District’s policies on staff and student use of computerized information resources and the regulations established in connection with these policies. Each staff member and student will sign an acceptable use agreement prior to gaining access to the District’s Computer System.

The following notice is displayed to all Iroquois Central School District users as they initially login to the District’s computer system:

This computer is the property of the Iroquois Central School District. It is for authorized use only. Users (authorized and unauthorized) have no explicit or implicit expectation of privacy.

Any or all users of this system and all files on this system may be intercepted, monitored, recorded, audited, inspected, and disclosed to authorized Iroquois Central School District administrators and/or law enforcement. By using this system, the user consents to such interception, monitoring, recording, auditing, inspecting, and disclosure at the discretion of the Iroquois Central School District.

Unauthorized or improper use of this system may result in administrative disciplinary action and civil and criminal penalties. By continuing to use this system, you indicate your awareness of these terms and conditions of use.

**IROQUOIS CENTRAL SCHOOL DISTRICT
ACCEPTABLE USE INCIDENT FORM**
(To be completed by an Administrator)

Building Location: _____

Date of incident: _____ Estimated time of incident: _____

Name(s) of individuals involved in the incident: _____

Username, machine name and IP address (if applicable): _____

Nature of the suspect incident: _____

Site where the incident occurred: _____

Student-related incident: Have student(s) and parent/guardian been notified? [] Yes [] No

Employee-related incident: Has employee been notified? [] Yes [] No

Manner of Notification: [] personally notified
[] written notice
[] telephone notice

Actions taken: _____

Administrator's Signature

Date

SUBJECT: CHILDREN'S INTERNET PROTECTION ACT: INTERNET CONTENT FILTERING/SAFETY POLICY (page 1)

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. 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 ensure 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 e-mail and chat rooms 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 web sites 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

SUBJECT: CHILDREN'S INTERNET PROTECTION ACT: INTERNET CONTENT FILTERING/SAFETY POLICY (Cont'd)

- 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 in "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.

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.

SUBJECT: CHILDREN’S INTERNET PROTECTION ACT: INTERNET CONTENT FILTERING/SAFETY POLICY (Cont’d)

“Affirmative Consent” (opt-in) Student use of the District’s computer system (DCS) is conditioned upon written agreement by all students and their parents/guardians that student use of the DCS will conform to the requirements of this policy and any regulations adopted to ensure acceptable use of the DCS. All such agreements shall be kept on file in the District Office.

The District has provided reasonable public notice and has held at least one (1) public hearing or meeting to address the proposed Internet Content Filtering/Safety Policy prior to the Board adoption. Furthermore, appropriate actions will be taken to ensure the ready availability to the public of the District’s Internet Content Filtering/Safety Policy, as well as any other District policies relating to the use of technology.

47 United States Code (USC) Sections 254(h) and 254(1)
47 Code of Federal Regulations (CFR) Part 54
Education Law Section 814

Section III-H – Infrastructure Needs/Tech Specifications, and Design

Current Status and Needs

Inventory – A comprehensive database, listing information such as manufacturer, model, serial number, Iroquois CSD inventory number, and building/room location, is maintained in the Technology Office. The Iroquois Technology department will be responsible for inventory-related activities for all computer-related hardware purchased

by the Iroquois Central School District. The following procedures are followed for all district technology purchases:

- All computer-related items arrive at ICS Technology Department, components tested, software installed, and installation scheduled.
- Fixed Asset Accounting – ICS Technology Department enters the asset data into the Technology Inventory Database (indicating Model Number, Serial Number, location assignment, and an ICS Tracking number is assigned and permanently affixed to the item).
- Packing slips are matched to copies of the purchasers purchase order and filed in the Technology Department.
- Accounts Payable Department is notified when the purchase order is completely filled and authorization for vendor payment is given.
- Items are delivered by the Technology Department staff in cooperation with the District Mail Courier.
- Installation and initial user training is provided by the Technology Department Computer Specialist who is assigned to the receiving location.

Purchasing – Initial purchasing requests are channeled through the building administrators to determine instructional relevancy and funding availability. The Technology Department provides guidance in selecting the appropriate equipment and researches current State Contracts for pricing and availability. Final purchasing authority rests with the Superintendent and the Business Administrator.

Administrative Software Needs – Software requests are channeled through the building administrator. Final approval of said software must be given by the Technology Department to ensure hardware compatibility. It is important that any software selected is platform independent. Ultimately the ICS Technology Department staff will be responsible for installing, maintaining, and troubleshooting the system. Administrative Software must be available 7 days a week--24 hours a day. Any downtime can and will create user anxiety/frustration. Installation timelines are established between the Superintendent and the Technology Department.

Section III-I – Inventory

Current Software Inventory

	ADMIN	EP/MP/ WP/II	MS LAB	HS LAB
Microsoft Office 2010 (1700 licenses)	X	X	X	X
Symantec Anti-Virus (District Site License via WNYRIC)	X	X	X	X
eSchool Web-Based SMS (District Site License via WNYRIC)	X	X	X	X
Follett Opac (6 building)		X	X	X

licenses)				
Adobe Creative Suite 3: Illustrator; Indesign; Photoshop; Reader (500 licenses)	X	X	X	X
Studio 8: Dreamweaver; Fireworks8; Flash 8; Contribute3 (500 licenses)				X
SchoolVue (135 licenses)			X	X
Geometer’s SketchPad (50 licenses)				X
Peachtree Accounting (1 Classroom license)				X
Reading A to Z (12 licenses)		X	X	X
Kidspiration (400 licenses)		X	X	X
Edconnect (3 site licenses Primary buildings)		X		
Fonts 4 Teachers (Free software)		X		
Math for the Real World (4 site licenses Primary buildings and II)		X		
Lead 21	X	X		
Envisions Math	X	X		

Infrastructure – Iroquois CSD will provide a conduit, which will be flexible and serve a multiplicity of technologies. Any new wiring and devices that are installed will enhance existing structures and not duplicate prior efforts. It is important that all equipment purchased for the delivery of electronic data comply with the standards of the outside communication carrier.

Network Operating Systems – Systems will be chosen and upgraded based on the requirements of the software required by the faculty and staff. The Technology Department will make the final decision. ICS Technology Department will be responsible for maintaining, troubleshooting, and scheduling upgrades.

Electrical capacity will be addressed by the Technology Department and/or the Superintendent of Buildings and Grounds based upon existing wiring. ICS Technology Staff will submit recommendations to building administrators when they foresee possible overloads.

Data Network Infrastructure – Iroquois Central School District is comprised of six major buildings, three of them (Iroquois High School, Iroquois Middle School, and Iroquois Intermediate School) are situated on the Main Campus. The three remaining schools (Wales Primary School, Elma Primary School, and Marilla Primary School) are remote buildings located in the towns of Wales, Elma, and Marilla respectively. The

Administrative Offices and Support Staff Offices are housed at various locations on the Main Campus.

The primary means to connect computers and printers to the network is high quality copper and fiber optic cabling, which meet or exceed standards for providing gigabyte transfer rates to the desktop computer or server. The Main Campus buildings are connected via a Gigabit fiber-optic backbone, which provides high-speed data access to the district servers. WAN connectivity is accomplished with dual point-to-point T-1 Data Telecommunications lines running from Main Campus to each of the Primary buildings. These T-1 lines are a shared-use line with the Districts telephone system. Additionally, a Gigabit Broadband fiber-optic telecommunication line is utilized to connect the Iroquois CSD network to the Erie 1 BOCES WAN for Internet access, mainframe applications housed at the Erie 1 BOCES RIC, and external E-mail transfer (See visual in Appendix A-3).

Network cabling for the district is accomplished by utilizing resources available within the District Maintenance Facilities, in coordination with the Technology Department. Staff members of the Technology Department are primarily responsible for planning, scheduling, installing, testing, and maintaining network cabling.

Network traffic internal to Iroquois Central School is monitored by the Technology Department and the existing data infrastructure is reviewed minimally once per year to insure that data is being transferred in the most cost effective and efficient manner.

We continue to update our infrastructure yearly by replacing old hubs and switches with managed Power Over Ethernet switches in all wiring closets on main campus. POE will provide power to any device that may need it in remote locations for future technologies, such as Wireless Access Points, or VoIP phones. Old switches can be moved to our Elementary Buildings, Bus Garage and Maintenance Buildings. A VPN for remote connectivity to the network will help stabilize the backbone of the network and provide manageability and advanced trouble shooting capabilities. Six servers were replaced, increasing our storage capacity to 3.6 terabytes.

Iroquois Central Schools Hardware Inventory:

Inventory	Computer Labs	Class-rooms	Library or Media Ctr	Admin. Office	Other Location	Planned Future Acquisitions		
						Year 1	Year 2	Year 3
Computers (list by type)								
A. Desktop	180	600	75	15	10	270	270	270

B. Laptop	1000	60	125	15	10	90	90	90
Number of computers listed above that are Internet ready	1180	660	146	30	20	360	360	360
Number of computers listed above equipped for multimedia	10	660	6	1	6			
Peripheral Devices								
A. Printers	4	80	6	10	10	4	4	4
B. Scanners	1	3	3	7				
C. Modems (below 28.8 Kbps)								
D. Modems (28.8 Kbps or above)								
E. Assistive/Adaptive Devices								
F. Digital Cameras					12	2	2	2
G. TV Monitors		110	6		48	0	0	0
H. VCRs/Laser Disk Players					0	0	0	0
I. Projection Devices	4	100	6	1	70	30	30	30
J. Satellite Dishes								
K. Video Cameras					8	2	2	2
Software (list by type)								
A.								
B.								
Network Equipment								

A. Hubs								
B. Routers					4	0	0	0
C. Servers					15	2	2	2
D.Switches					40	3	3	3
Number of rooms wired for internal connections								
Telecommunication Links								
A. Full or fractional T1					3	0	0	0
B. ISDN								
C. Dedicated cable/microwave								

Every classroom throughout the district is equipped with a Windows-based teacher workstation. Additionally, each Primary building has four student computers in each classroom and the Intermediate School has four student computers in each classroom using the FiddleHead system of shared resources.

Technology Department staff members are under the operational guidance of the Microcomputer Technical Support Specialist. Within the department, there are two Computer Support Assistants, one Clerk Typist, and one Audio/Visual Specialist. Also, contracted through BOCES, we have one .2 FTE Senior Technical Consultant, and one .4 FTE LAN Technical Support person.

Current hardware needs are assessed by the Technology Department and Building Principals with a desktop computer replacement cycle of 20% each year. The replacement schedule for district equipment is as follows:

- Replacement batteries for laptops (as needed as laptops are still within warranty period)
- Server/Student/Staff computer replacement schedule is 5 years
- Printer replacement schedule is 5 years
- Switch replacement schedule is 5 years
- Projector replacement schedule is 6 years

Purchasing goals from year to year are as follows:

- Purchase 360 computer yearly
- Purchase 4 printers yearly

- Replace or Update 4 server yearly
- Replace or Update 3 switches yearly
- 30 projectors yearly
- 30 projector bulbs yearly

To meet these yearly goals it is estimated that the district will need \$381,500.00 per year.

Section III-J – Increase Access
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The Iroquois Central School District provides multiple opportunities for staff and students to interact and use technology. Each of our three primary schools as well as the Middle School and High School have multiple computer carts with 20-30 wireless laptops in each cart. These carts are divided equally among the grade levels as well as a dedicated cart in each Library Media Center K-12. Each classroom K-5 has four dedicated computers in addition to the laptop cart access. The Middle School and High School have several computer labs where students may work on projects involving technology including a dedicated area in each Library Media Center with desktop machines. The Western New York Regional Information Center has updated our network and our main campus is wireless allowing access anywhere in any of the buildings. Once Time Warner Cable updates our fiber lines to the three primary buildings, the WNYRIC will replace current wireless routers with ones identical to the main campus.

Students with disabilities have access to several adaptive software and hardware tools as determined by their Individual Education Plan. In some cases, students use voice recognition software, screen view amplifiers (ClearNote), headphones and special software such as Boardmaker, Kurweil and Classroom Suite to communicate and interact with staff. Each classroom K-5 has a ceiling mounted digital projector that allows the teacher the use curricular material and multi media products in zoom mode to highlight lesson plan objectives. The Middle School and High School are in the process of having the wiring put in place to eventually allow all K-12 classrooms a ceiling mounted projector.

To assist with instruction each classroom K-5 has a SoundField surround sound speaker and microphone system that the teacher can use to amplify their voice, multi media such as DVD plus a computer interface to increase the sounds of web sites, presentations and lessons projected from the computer. The Middle School and High School has some rooms wired for SoundField as well as portable sound systems that follow students throughout the day due to their IEP requirement. It is the intention to have all K-12 classrooms updated to SoundField systems.

Each staff member and each student has a network folder that is accessed via Active Directory rights through a Windows 2003 server to store files and projects. In addition, each building has a shared folder to allow teachers the opportunity to share lesson

plans, common forms, installation and user guides and password information. This is backed up each night to avoid any data loss and ease the data recovery process.

Section IV-K – Budget and Timetable

Projected Budget

The New York State Department of Education and the Board of Cooperative Educational Services provide aid packages to districts attempting to purchase networked technology. Detailed requests for services from Erie 1 BOCES continue to make this plan possible without added burden on the taxpayers of the district.

CATEGORY	2013-14	2014-15	2015-16
Staff Salaries	\$209,895.00	\$216,192.00	\$222,678.00
State Aided Computer Equipment	50,805.00	50,805.00	50,805.00
Maintenance	9,950.00	9,950.00	9,950.00
Professional Development	500.00	500.00	500.00
Computer Supplies	25,000.00	25,000.00	25,000.00
State Aided Software	37,548.00	37,548.00	37,548.00
BOCES Computer Services	217,762.00	219,940.00	222,139.00
TOTAL	\$551,460.00	\$559,935.00	\$568,620.00
Technology Reserve Fund			
TOTAL			

Section IV-L – Coordination of Resources

The Iroquois Central School District currently has four revenue streams to address technology needs. Local taxes are collected as part of the levy to provide funding for the school district. A portion of this money is used for technology. New York State provides several aid able options to fund technology including New York State software money plus a percentage of money returned if technology is purchased through a recognized Board of Cooperative Educational Services. The Iroquois Central School District also receives varies Title money through Federal Grants that must be used for technology related purchases (Title IID for example). The last area of funding comes from a technology reserve fund that can be used in case of emergencies or for long term technology purchases. The Iroquois Central School District in partnership with the Alden, Depew and Yorkshire Pioneer school districts recently collaborated on a grant for additional technology to assist Students with Disabilities and English Language Learners meet local and state curriculum goals.

Section V-M – Evaluation

The parties identified to be responsible for the implementation of the tasks will monitor progress toward the goals within the timeframes listed. The following tasks will be undertaken to evaluate the appropriateness and effectiveness of the Technology Plan:

Analysis of Completed Activities:

- Log of time spent on implementation activities;
- Number of professional development activities leading toward technology implementation;
- Cost of improvements, milestones; and,
- Analyses of responsible parties logs with their comments, recommendations for future implementations.

Analysis of Student Performance:

- State assessments;
- Regents exams; and
- IEP completion, all as a function of integrating technological resources.

Written Surveys and Focus Groups:

- Assess level of “buy in” to vision of Technology Department and School District mission;
- Determine changes in curriculum, instruction and assessment with respect to technology; and,
- Assess integrated use of technology and any barriers to its use.

Identification of Community Needs and Ideas:

- Survey (formal and informal) business, industry, community, other districts, BOCES, NYS Education Department to determine what improvements can be made, where and how.

While this plan is comprehensive and written to be implemented in phases, the Plan cannot take into account technologies that do not currently exist. Some technologies that do exist were not considered at this point, especially in the video area and satellite capabilities. However, the document is a working one – which will be updated and modified over time, at a minimum of once per year. An annual update of the document will be required as finances, new technologies, and curriculum needs dictate. The Plan will be presented to the Board of Education for approval and assistance in implementing this long-range technology plan to help the students and staff of our district function in today's world of technology.

Section V-N – Acceptable Use Policy
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SUBJECT: STAFF USE OF COMPUTERIZED INFORMATION RESOURCES

The Board of Education will provide staff with access to various computerized information resources through the District's computer system (DCS hereafter) consisting of software, hardware, computer networks and electronic communication systems. This may include access to electronic mail, so-called "on-line services" and the "Internet." It may also include the opportunity for some staff to have independent access to the DCS from their home or other remote locations. All use of the DCS, including independent use off school premises, shall be subject to this policy and accompanying regulations.

The Board encourages staff to make use of the DCS to explore educational topics, conduct research and contact others in the educational world. The Board anticipates that staff access to various computerized information resources will both expedite and enhance the performance of tasks associated with their positions and assignments. Toward that end, the Board directs the Superintendent or his/her designee(s) to provide staff with training in the proper and effective use of the DCS.

Staff use of the DCS is conditioned upon written agreement by the staff member that use of the DCS will conform to the requirements of this policy and any regulations adopted to insure acceptable use of the DCS. All such agreements shall be kept on file in the District office.

Generally, the same standards of acceptable staff conduct which apply to any aspect of job performance shall apply to use of the DCS. Employees are expected to communicate in a professional manner consistent with applicable District policies and regulations governing the behavior of school staff. Electronic mail and telecommunications are not to be utilized to share confidential information about students or other employees. This policy does not attempt to articulate all required and/or acceptable uses of the DCS; nor is it the intention of this policy to define all inappropriate usage. Administrative regulations will further define general guidelines of appropriate staff conduct and use as well as proscribed behavior.

District staff shall also adhere to the laws, policies and rules governing computers including, but not limited to, copyright laws, rights of software publishers, license agreements, and rights of privacy created by federal and state law.

Staff members who engage in unacceptable use may lose access to the DCS and may be subject to further discipline under the law and in accordance with applicable collective bargaining agreements. Legal action may be initiated against a staff member who willfully, maliciously or unlawfully damages or destroys property of the District.

Privacy Rights

Staff data files and electronic storage areas shall remain District property, subject to District control and inspection. The computer coordinator may access all such files and communications to insure system integrity and that users are complying with

requirements of this policy and accompanying regulations. Staff should NOT expect that information stored on the DCS will be private.

Implementation

The Board of Education directs the Superintendent or his/her designee to develop administrative regulations to implement the terms of this policy, addressing general parameters of acceptable staff conduct as well as prohibited activities so as to provide appropriate guidelines for employee use of the DCS.

SUBJECT: STUDENT ACCESS TO NETWORKED INFORMATION RESOURCES

In a free and democratic society, access to information is a fundamental right of citizenship. The Board recognizes that as telecommunications and other new technologies shift the ways that information may be accessed, communicated and transferred by members of the society, those changes may also modify curriculum and instruction. The Board supports access by students to information resources.

Telecommunications, electronic information sources and networked services significantly alter the information landscape for schools by opening classrooms to a broader array of resources. In the past, instructional and library media materials could usually be screened by committees of educators. This policy requires that all such materials be consistent with District-adopted guides, supporting and enriching the curriculum while taking into account the varied instructional needs, learning styles, abilities and developmental levels of the students.

Electronic information research skills are now fundamental to preparation of students. The Board expects that all staff will blend thoughtful use of such information throughout the curriculum and that the staff will provide guidance and instruction to students in the appropriate use of such resources.

Students are responsible for good behavior on school computer networks just as they are in the classroom. The network is provided for students to conduct research. Access to network services will be provided to students in a responsible manner.

Access to the network is a privilege and not a right. Students abusing their privilege to use the network may have that privilege suspended or revoked.

Access to telecommunications will enable students to explore thousands of libraries, databases, and bulletin boards while exchanging messages with people throughout the world. The Board believes that the benefits to students from access in the form of information resources are invaluable.

Newsmaker Fluency Software (4 licenses)		X
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The Board authorizes the Superintendent to prepare appropriate administrative regulations and procedures for implementing this policy and for reviewing and evaluating its effect on instruction and student achievement.