huntington union free school district

HUNTINGTON UNION FREE SCHOOL DISTRICT TECHNOLOGY PLAN 2009 - 2012

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TECHNOLOGY PLANNING COMMITTEE

The purpose of the Huntington UFSD Technology Committee is to make technology-related decisions, recommendations and plans that impact learning and instruction, and to provide two-way communication between all stakeholders.

This plan is intended to correspond with all Huntington UFSD educational initiatives and to support our District's mission and strategies. It was developed from the belief that technology can significantly enhance the learning environment and improve teaching and learning. The plan was created through a collaborative process with administrators, faculty, support staff, and community representation. Members attended sessions held between September 2008 and March 2009 to develop various components of the plan.

District Technology Committee Members

Mr. John Finello, *Superintendent*
Dr. Joseph Giani, *Assistant Superintendent for Personnel and General Administration*
Dr. Barbara Lacey, *Assistant Superintendent for Curriculum and Instruction*
Mr. David Grackin, *Assistant Superintendent for Finance and Management*
Mr. Wayne Edwards, *Director of Mathematics*
Dr. Kenneth Card, *Principal of Woodhull Intermediate School*
Mrs. Joann Kavanagh, *Coordinator of Technology*
Mrs. Camille DeCanio, *HS Librarian*
Ms. Christine Amodeo, *Intermediate Elementary Librarian*
Mrs. Denise D'Attolico, *PTA Representative*
Mr. Edward Parry, *JHS Teacher*
Ms. Georganne White, *Elementary Librarian*
Mr. James Graber, *High School Teacher*
Mrs. Karen Mallow-Rizzzo, *Elementary Teacher*
Mrs. Maryann Daly, *SEARCH Program Chair*
Mr. Michael Tudisco, *Technician*
Ms. Patrice Persichilli, *Elementary Teacher*
Mrs. Patricia Dillon, *Elementary Librarian*
Mrs. Paula Gasparino, *Elementary Teacher*
Mrs. Tiffanie Kelly, *Elementary Teacher*

TECHNOLOGICAL VISION OF THE HUNTINGTON SCHOOL DISTRICT

To best determine how the Technological Vision of the Huntington Union Free School District is to be structured, not only for the necessity of a 3 year plan, but also for years far ahead, one must refer to the Mission of the District.

Huntington School District Mission Statement:

"Recognizing the strengths of our District's traditions, its history of community support, the diversity of our population and our commitment to educational excellence, the mission of the Huntington Union Free School District is to educate students by effectively teaching an enriched body of knowledge through the active participation of all students, building upon their unique talents and abilities to produce creative, self-assured, responsible citizens who are capable of critical thought and action."

The above passage contains 4 main focuses pertaining to student achievement and their preparation for the future:

i. Teaching an enriched body of knowledge
ii. Active participation of all students
iii. Building unique talents and abilities
iv. Produce creative, self-assured, responsible citizens who are capable of critical thought and action.

The Technological Vision of the Huntington School District is to advance the academic achievement of all by integrating Technology into curriculum and instruction. People in the 21st century live in a technology and media-rich environment, with immediate access to an abundance of information. Rapid changes in technology tools and the ability to collaborate continue to advance at an unprecedented rate. For our students to be effective in the 21st century as active citizens and workers they must have the ability to exhibit a wide range of functional and critical thinking skills in the areas of information literacy, media literacy and communication literacy. Our vision is to meet these challenges by incorporating the 21st Century Standards and International Society for Technology in Education National Educational Technology Standards into our curriculum and instruction with the intent that it will lead to less focus on technical skill sets, and more emphasis on core content delivery. The above goals of the mission statement can be achieved with the aid of technology:

- focusing on 21st century skill, content knowledge and expertise
- utilizing multimedia to accompany core content lesson material
- introducing technological accessories that aid in addressing all learning styles as to differentiate instruction

- allowing "digital native talents and skill sets" to express their knowledge and abilities
- providing teachers with real time student data to analyze trends and adjust curriculum accordingly
- communicating with parents and community via District Web Page and Parent Portal
- providing students with an ability to self assess and reflect on their own growth

By integrating technology into curriculum and instruction, we will be aiding in the goal of creating independent citizens that are not only capable of critical thought and action, but also future workers that will be able to easy assimilate into the global market.

Goals of the Huntington School District

Goal 1

To have a clear set of technology goals that are funded and evaluated on a yearly basis.

Strategies

a) The district supports a technology plan that is realistic and has clearly stated goals and strategies that align with the district mission statement. (2009-2012)

b) The district has a technology committee with representatives from all stakeholder groups.
   a. Committee will meet at least 4 times per school year and additionally when it warrants (2009-2012).
   b. Conduct a yearly update (2009-2012).

c) The Technology Team consisting of the Assistant Superintendent for Business and Finance, the Technology Coordinator, and the district technical staff will meet weekly when possible to review technology issues and work on projecting the needs of the district. This team will update the Technology Committee during their meetings (2009-2012).

d) The district will include yearly funding for technology in the operational budget (2009-2012).
   a. Federal, state, and private resources will be utilized.
      i. Investigate and pursue alternative sources for technology funding.
      ii. Investigate leasing options.

e) Evaluate progress with the goals set in this plan and make adjustments as needed (2009-2012).

f) Assess technology products and services as needed (2009-2012).
   a. Technology meeting agendas need to include an update and evaluation of progress with the benchmark objectives.

Goal 1	Timeframe	Responsibility	Status
1a	2009-2012	Technology Committee	Ongoing
1b	2009-2012	Technology Committee	Ongoing
1c	2009-2012	Technology Team Technology Committee	Ongoing
1d	2009-2012	Technology Team	Ongoing
1e	2009-2012	Technology Team Technology Committee	Ongoing
1f	2009-2012	Technology Team Technology Committee	Ongoing

Goal 2

To integrate voice, video and data networks capable of providing communications, among administrators, teachers, students, support personnel and the community (2009-2012).

Strategies

a) Maintain and update the district website in order to publish important and necessary school information to students, parents, community and staff (2009-2012).
b) Review our servers and manage our environment effectively and cost efficiently (2009-2012).
    a. Upgrade Active Directory by creating one forest to replace the current 8 separate forests.
c) Implementation of VoIP to replace and expand current phone system (2009-2010)
d) Purchase SmartBoards (2010-2011).
e) Maintain email system for all staff (2009-2012).
f) Upgrade Video Lab at the High School with new Mac computers (2009-2010).
g) Purchase and maintain all necessary devices and services to allow connectivity among all district buildings where feasible (2009-2012).
    a. Remote backup of all critical systems.
    b. Provide adequate security to prevent access and tampering.
h) Review and revise when necessary the district AUP to reflect the ever changing appearance of the Internet (2009-2012).
i) Adhere to requirements of CIPA (Children's Internet Protection Act) (2009-2012).
j) Employ the Parent Portal feature of our student management system eSchool to access student attendance (2009) and grades (2010).
k) Maintain teacher eBoards as a means of communication between students, teachers, parents, and community (2009-2012).
l) Plan for the continued rollout of peripherals i.e. SmartBoards, student response systems, LCD projectors, videoconferencing appliances, etc. (2009-2012).
m) Maintain and add additional wireless access points at Finley Middle School (2009-2010).

The Huntington School District has a fiber optic WAN in place and in February 2009 migrated to the installation of PRI's form POTs lines. This migration will provide us the ability to change our phone system to "Voice over the Internet" sometime in 2009 -2010. We are planning to migrate to VoIP in 2009-2010 because in 2010-2011 we want to extend the phone system to every classroom and instructional space in the district. Vendor for this service is to be determined at a later date.

Equipment, switches and all necessary infrastructure needs will be evaluated by the Technology Team during the course of their weekly meetings; and the Technology Committee yearly to be updated and planned for when necessary. The updating of switches will be examined during the 2011-2012 year of this plan.

WAP's removed from the High School during the upgrade of the wireless system during the 2008-2009 school year will be evaluated and redistributed to Finley Middle School. This will increase the current wireless access points now available at the school.

Internet connectivity is maintained via a 20mb fiber connection to Open Access.

The financial system is managed by Finance Manager which is backed up daily.

An iPrism filter appliance manufactured by St. Bernard for internet filtering, ensures compliance with the Children's Internet Protection Act.

District email is hosted in-house by Microsoft Exchange Server 2003 Enterprise Edition and is archived and backed-up at an offsite location by Intronis. A Barracuda appliance is utilized to scan for viruses and spam.

The District utilizes a dedicated server for the Follet- Destiny Library Manager System. This system combines circulation, cataloging, searching, reporting and management in one centrally installed library system. The librarian, teachers and students accesses the system through desktop workstations.

The District website is a source of pride to the Huntington Community. Communication between the school and community is updated daily. Each school has its own link with information updated as needed. A direct link to teacher's eBoards allows easy access for parent and student communication.

The student management system, eSchool, currently allows parent/guardian access to student attendance at the High School and Finley Middle School. The District is currently investigating the opening of this portal to allow for viewing of grades for the 2009-2010 school year.

Goal 2	**Timeframe**	**Responsibility**	**Status**
2a	2009-2012	Web Publishers	Ongoing
2b	2009-2012	Technology Team	Ongoing
2c	2009-2012	Technology Team	Ongoing
2d	2009-2012	Technology Team	Ongoing
2e	2009-2012	Technology Team	Ongoing
2f	2009-2012	Technology Team	Ongoing
2g	2009-2012	Assistant Superintendent for Business and Finance	Ongoing

2h	2009-2012	Technology Committee Technology Team	Ongoing
2i	2009-2012	Technology Committee Technology Team	Ongoing
2j	2009-2010	Technology Team	Ongoing
2k	2009-2012	Technology Committee Technology Team	Ongoing
2l	2009-2012	Technology Team	Ongoing
2m	2009-2010	Technology Team	2009-1010

Goal 3

To integrate the use of technology into all aspects of curriculum, instruction and administration, so that its use extends opportunities and potential for all students, staff and community (2009-2012).

Strategies

a) Support curriculum integration of MS Office applications, Inspiration, Kidspiration, Internet and other educational applications as needed (2009-2012).

b) K- 12 Teachers assume responsibility for integrating technology skills with their teaching by incorporating both 21st Century standards and ISTE NETS standards for both teachers and students (2009-2012).
    a. NYS - An ISTE Crosswalk by Six Major Categories

c) Develop curriculum units through the use of Curricuplan, a web based curriculum mapping tool, that align with 21st century standards and ISTE NETS for students and teachers (2009-2012).
    a. Focus of these curriculum units will be in the area of English Language Arts (2009-2012).

d) Craft developmentally appropriate learning opportunities using technology based instruction that support differentiated instruction (2009-2012).

e) Support classroom technology integration through the push-in model of the District Technology Coordinator (2009-2012).

f) Utilize technology to streamline and automate assessment data collection and analysis to implement data driven decisions (2009-2012).
    a. E-School
        i. Student Management System which can be accessed by parents through web access.
    b. Connect Ed
        i. Utilized for notifications from school and emergency contact.
    c. Discovery Education Assessments (Thinklink)
        i. Teachers are being trained to use these assessments to analyze data and inform instruction. Probes are created based on sub skills the teachers have then taught to assess learning.
    d. BARS – BOCES Assessment Reporting System
        i. Teachers are trained to access data from NYS Exams, analyze data by disaggregating the data by subgroup to inform instruction and close the achievement gap.
    e. LARS – Literacy Assessment Report System
        i. Used by stakeholders to track student data and analyze results of direct instruction reading programs.
    f. Data Mentor
        i. Used for data analysis of district to state comparisons.

Goal 3	Timeframe	Responsibility	Status
3a	2009-2012	Technology Coordinator	Ongoing
3b	2009-2012	Asst. Supt. Curriculum Principals, Dept. Chairs, Coordinator of Technology	Ongoing
3c	2009-2012	Asst. Supt. Curriculum Principals, Dept. Chairs, Coordinator of Technology	Ongoing
3d	2009-2012	Asst. Supt. Curriculum Principals, Dept. Chairs, Coordinator of Technology	Ongoing
3e	2009-2012	Technology Coordinator	Ongoing
3f	2009-2012	HUFSD Staff	Ongoing

Support for integration of software applications, peripherals and digital content for the staff will be ongoing and by request of the staff to the Technology Coordinator. Additional training in the use of data from the online sources will be done through the Assistant Superintendent of Curriculum and Instruction's office. This training will take place through Superintendents conference days, release time, staff meetings and after school workshops.

Goal 4
To provide technology professional development to all teaching staff for the effective use of technology to improve student learning (2009-2012).
Strategies

a) Identify staff development needs to support further integration of technology in classrooms (2009-2012).
b) Continue in-class coaching in technology integration aligned with the District's Professional Development Plan (2009-2012).
c) Sustain the professional development with coaching; modeling best practices, district based mentoring, and user groups (2009-2012).
d) Encourage teachers to take advantage of out of district workshops and conferences 2009-2012).
e) Promote 'Turn-key Trainer' approaches where selected staff receive training and then train other staff through both structured classes and small informal groupings.
f) Encourage attendance at workshops, seminars, and courses provided by professional organizations, BOCES, and Teacher Centers.
g) Recommend that at least one staff meeting in each building be set aside for technology integration.

Goal 4	Timeframe	Responsibility	Status
4a	2009-2012	Technology Committee	2009
4b	2009-2012	Technology Coordinator	Ongoing
4c	2009-2012	Technology Coordinator	Ongoing
4d	2009-2012	Technology Team	Ongoing
4e	2009-2012	Technology Team Technology Committee	Ongoing
4f	2009-2012	Asst. Supt. Curriculum Huntington Teacher Center	Ongoing
4g	2009-2012	Principals	Ongoing

Infrastructure, Equipment and Software Update 2008-2009 School Year and Projections for 2009-2012

- Rollout of 225 new computers in Huntington High School, Finley Middle School and Woodhull Intermediate School
- Disconnected Thin Client and redeployed Terminal servers at Huntington High School, Finley Middle School, and Woodhull Intermediate School
- Upgrade of Iprism server
- Replace Huntington High School Administrative server
- Replace Network Switch at Jack Abrams Intermediate School
- District-wide automation of Libraries
- Upgrade of wireless communication access points within the High School
- SmartBoard Interactive Whiteboards
- Upgrade of Smart Notebook software
- eBoards
- Video Conferencing

Our 2008-2009 plan called for the upgrade and extended use of wireless communication access points within the High School. This facilitated increased mobility and reliability for student computer use in the High School classrooms. As a result of the wireless upgrade, an additional laptop cart with 25 laptop computers was rolled out for use in the Humanities Department.
For the 2009-2012 Plan we intend to investigate the possibility of using the wireless switches removed from the high school to add additional access points at the middle school.

We also planned for the automation of the District's 8 Libraries. The process for automation began at the end of the 2008 school year and continued throughout the summer with training for all the librarians. Electronic access to the catalog data describing library items gives many more points of access for finding materials because summaries, notes and keywords are indexed searches. Librarians have commented on the ease of use of the barcode readers and their ability to circulate items and maintain an accurate account for each student's activities. Automation has led to more productive use of professional time in searching for materials for students and teachers. Resources can now be shared and tracked.

With increased use of computers in many of our schools our thin client computers were no longer meeting the needs of our teachers and students. Teachers needed the ability to access USB ports for peripherals as well as have sound capabilities and faster processing machines. Many new peripherals were not able to be used on these thin client machines. The District entered into a three year lease purchase agreement with our Western Suffolk BOCES. This allowed us to lease 225 new computers to replace outdated terminal thin

client appliances. The High School received 105 computers, Finley Middle School received 25 computers and Woodhull Intermediate School received 95 computers. Thin client was disconnected and Terminal servers were redeployed at the three schools. When our three year lease purchase agreement with our Western Suffolk BOCES expires the District plans to investigate the purchase of SmartBoards as a major initiative (2010-2011).

This year we also replaced the network switch at Jack Abrams Intermediate School (formally Huntington Intermediate School) and replaced the Huntington High School administrative server. We also upgraded the IPrism server to accommodate the added use of the district computers accessing the Internet. The District plans to investigate the upgrading of switches in the 2011-2012 school year.

SmartBoard interactive white boards were rolled out in some of the buildings as a result of grants awarded through the Huntington Foundation for Excellence and individual department purchases. Three 600i fixed boards, which are all in one units, were distributed to two of our primary schools, one to Washington Primary School and two to Jefferson Primary School. We added five additional portable or fixed boards to other schools in the District. We will continue to add additional white boards as our future budgets permit.

We began a pilot of eBoards, which is an internet based subscription electronic bulletin board, as a means of increasing communication and collaboration and further integrating technology into the classroom by the posting of links, photos, pod casts, streaming video, and other digital content. The initial pilot of fifty eBoards was so successful that we have now added an additional fifty boards. eBoard user groups were established by the Technology coordinator to support this initiative. We will continue over the life of this plan to maintain the current 100 eBoard accounts and add additional accounts if necessary. Training for these eBoards is ongoing and supplemented by our Teacher Center.

Video Conferencing was initiated towards the later part of 2008 with two Polycom Video conferencing units which were part of a grant awarded to the District by the Huntington Foundation for Excellence in Education. These two units have been made portable for use in all eight schools throughout the district and make use of the cable modem in each of our libraries which was installed by Cablevision two years ago. Teachers have participated in programs from NASA and SPLIA (Society for the Preservation of Long Island Antiquities), as well as video conferencing with classes from other parts of the country. Additional videoconferencing opportunities continue to take place this year in the form of additional NASA conferencing and fifth and sixth grade distance learning programs with the NY Hall of Science. Activities have been created by the Technology Coordinator for teachers to pair up with sister schools within district to practice projects that can later be attempted with schools outside our district. This was done in an attempt to allow "digital immigrants" practice with this new technology in a collegial atmosphere.

We continue to support a subscription to School Island, a web site for students and teachers, which provides content review and skill assessment activities for Math, Science, Social Studies, and Language Arts. Accounts have been set up for all staff grades 4-12. School Island provides instant feedback and progress reports that pinpoint a student's strengths and weaknesses. Teachers can monitor School Island usage by their students and even assign review sessions tailored to the needs of individual students. Teachers can also create, assign and monitor targeted assignments that emphasize the teacher's choice of units, themes, difficulty levels, and question attributes. Vocabulary worksheets and flash card sets can also be custom tailored for a student or class. Teachers have the option of choosing from a large database of questions or they can create their own. In our Technology Plan for 2009-2012 we will continue to develop teacher use of this site through staff development at faculty meetings and workshops held in conjunction with our Teacher Center.

We also have continued a district subscription to BrainPop, BrainPopJr. and BrainPop Espanol, a fun interactive site that teaches important concepts in core curriculum subject areas through on-line movies, quizzes, and other activities. This subscription allows teachers to utilize multimedia to support their content lessons. For the 2009-2012 Technology Plan we will continue to subscribe to this service and evaluate it yearly in the teacher needs assessment.

During the 2008-2009 school year we reviewed and purchased a subscription to Turnitin, a service to determine the originality of texts based on comparisons with their internal database and net-wide searches and Maps101 for the High School which provides online map and geography learning resources for K-12 classrooms.

The District subscribed to Discovery Streaming this year to provide the teachers and students with digital content for use in the classroom and home. Discovery Education streaming offers teachers with varying levels of integration skills the opportunity to learn to use Internet resources to acquire and enhance their teaching practice. With enhanced technology and teaching skills, teachers will be able to integrate this technology into the curriculum and use teaching strategies to promote higher-order thinking skills for students. Turn-key trainers from each building will be trained through release time and serve as a "go to" person in each of the buildings. The Technology Coordinator will also provide workshops as well as workshops through our Teacher Center (2009-2012).

Instructional Update 2008-2009 School Year and Projections for 2009-2012

As a result of the technological advancements made in the School District in 2007-2008 all teachers and students have easy access to computers and high speed Internet access. During the 2008-2009 school year, the importance has been and will continue to be on staff development with emphasis directed towards the secondary level teachers, with the aid of the building Principals and Directors.

Mandatory staff development sessions focused on the use of the new student management system have been scheduled for multiple times during the 2008-2009 school year for all faculty and staff. This occurs during faculty meetings and is a contractual requirement.

Future staff development will concentrate on the use of online data from various online sources such as Discovery Assessment (Think Link), BARS, Data Mentor, and LARS as a means to drive the instruction and close the achievement gap. This training will occur during release time, faculty meetings and workshops (2009-2012).

Staff Development for curriculum mapping will take place initially in 2009-2010 school year with the online curriculum mapping program Curricuplan. We plan to begin with 50 site licenses and increase the participation with additional licenses as determined by district needs. This will begin the process of all staff participating in an online community focused on the development of high quality instruction with the common goal of increasing student achievement. The use of the 'ISTE Crosswalk by Six Major Categories' will be utilized to align NYS standards and performance indicators with the mapping process. This will be accomplished through faculty meetings and release days. (2009-2012).

The Huntington School District continues to recognize that the best model of staff development to promote technology integration is the push-in model of lesson development. All current teachers have the availability of the Instructional Technology Coordinator to aid them with technological learning. The Coordinator, who is a turnkey trainer for Marco Polo, Thinkfinity, Intel Teach to the Future Essentials Course and SmartBoard interactive whiteboards, continues to implement these best practices in delivered content.

The Instructional Technology Coordinator, upon request of the building Principals and Department Chairpersons, provides group staff development on various instructional technologies. These group sessions occur during faculty meetings, Superintendent's Conference Days, grade level meetings, and staff development days. The Instructional Technology Coordinator also schedules one on one or small group lessons during the school day, or before and after school days, upon request of the teachers. The Instructional Technology also has the ability to push into classrooms and work directly with students, as a means to model technology infused lessons (2009-2012).

The Instructional Technology Coordinator will provide training and instruction in I-Safe's I-LEARN program to the principals and directors, who in turn, will turnkey to their teachers. I-LEARN provides "on demand" training to learn safe and responsible use of the Internet.
I-Safe information will be utilized by the Instructional Technology Coordinator as a means of community outreach to educate PTA and parent groups through our "Parent University" on the critical thinking and decision-making skills they need to recognize and avoid dangerous and/or unlawful online behavior (2009-2012).

Teachers additionally have the ability to partake in learning opportunities via the Huntington School District Teacher Center. Opportunities to do so range from group learning, hands on activities, and on-line self paced learning. The Teacher Center and the Huntington School District collaborated to bring a post graduate certificate program in Educational Technology from Stony Brook University to the district; unfortunately it did not run due to lack of enrollment. We will attempt to run this program again in January 2010 (2009-2012).

During the 2009-2010 school year the Technology Committee will create and administer a needs assessment to determine further direction with regards to staff development for technology. The needs assessment will be given to the teachers at the end of each year (2009-2010).

Teacher assessment of technology will be done informally through the teacher observation process done by principals and department chairs. Teachers will also self assess at the end of each year by completing a needs assessment created by the Instructional Technology Coordinator.

DISTRICT SPECIFIC STANDARDS AND ACTIVITIES

The below skill sets and correlated National Technology Standards are district specific goals and are the basis for a Technology Curriculum. Introduction, reinforcement, and mastery of skills will occur between grades K-8. At the completion of the mandatory 7th grade Technology course, students will be given a district specific evaluation to determine the level of the student's proficiency. Students that score at a lower rating will be counseled as to choices that are available at the High School level, by means of electives.

Delivery of curriculum will not revolve around direct instruction of technology skills, but rather as an addition to a core subject matter lesson. Further examination of these district specific goals will take place in the 2010-2011 school year.

I = Introduced
R = Reinforced
M = Mastered

Standard 1
BASIC COMPUTER OPERATIONS AND CONCEPTS

- Students will demonstrate a sound understanding of the nature of technology systems.
- Students are proficient in the use of technology

Students will learn and be able to:	K	1	2	3-5	6-8
Identify basic computer hardware	I	R	R	R	M
Use basic computer vocabulary	I	R	R	M	M
Use a mouse	I	R	R	M	M
Turn computer on and off properly	I	R	M	M	M
Open and close computer programs	I	R	M	M	M
Log in and out of network		I	R	M	M
Print		I	R	M	M
Use Save and Save As commands			I	R	M
Use right mouse button				I/R	M
Toggle between two open programs				I/R	M
Understand file attributes				I/R	M
Understand Operating System basics				I	R/M
Understand directory folder structure				I	R/M
Understand networking concepts				I	R/M

Standard 2
SOCIAL, ETHICAL, and HUMAN ISSUES

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Students will learn and be able to:

	K	1	2	3-5	6-8
Demonstrate appropriate use of computers (AUP Policy)	I	R	R	M	M
Demonstrate appropriate computer etiquette	I	R	M	M	M
Respecting the privacy of all users	I	R	M	M	M
Obey copy write laws regarding student generated material				I	R/M
Appropriately cites resources using prescribed formats				I	R
Understand that appropriate school speech extends to electronic publication and communication				I	R
Understand and observe information technology licensing restrictions				I	R/M

Standard 3
TECHNOLOGY PRODUCTIVITY TOOLS

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Students will learn and be able to:

WORD PROCESSING/ DESKTOP PUBLISHING	K	1	2	3-5	6-8
Use simple text editing skills	I	R	M	M	
Use 1 space between words	I	R	M	M	
Print document, use print preview, print selected and # of copies		I	R	M	
Perform basic formatting tasks (font style, color, bold, italic, underline)		I	R/M	M	
Use the delete and backspace appropriately		I	R/M	M	
Insert graphics from ClipArt		I	R/M	M	
Rename files			I/R	M	
Select and unselect text			I/R	M	
Cut, copy, paste within a document			I/R	M	
Use page setup options			I/R	M	
Use embedded tools; spell check and Thesaurus			I/R	M	
Compose and edit a document with appropriate formatting			I/R	M	
Use formatting functions and numbering, indents, page breaks, margins			I/R	M	
Use borders/drawing tools/graphics			I/R	M	
Insert graphics from outside source			I/R	M	

	Use a word processor in real world context (newsletters, type reports)			I/R	M
	Change other pagination features (paper size, page orientations			I	R/M
	Create and insert tables			I	R/M
Students will learn and be able to:	**SPREADSHEETS**	**K**	**1**	**2**	**3-5**	**6-8**
	Identify intended use			I	R	M
	Create simple spreadsheets with rows and columns			I	R	M
	Enter values and labels on spreadsheet			I	R/M	M
	Enter data in a cell, move from cell to cell			I	R/M	M
	Change size of cell, font attributes and align cell contents				I/R	M
	Specify data organization				I/R	M
	Select and edit data, cut, copy, paste within cells				I/R	M
	Insert and delete rows and columns				I/R	M
	Perform simple calculations within a spreadsheet				I/R	M
	Sort data, manipulate print attributes, remove gridlines				I	R/M
	Explain the rationale for choosing charts/tables or graphs to best represent data				I	R/M
	Determine and create appropriate types of graphs to best represent data				I	R/M
	Incorporate graphs in word processing				I	R/M
	Use spreadsheets to explore various formulas/functions and relationships				I	R/M

Students will learn and be able to:

PRESENTATION SOFTWARE	K	1	2	3-5	6-8
Create a new slide or presentation			I	R	M
Create a background or layout and change order of slides			I	R	M
Cut, copy, paste within a presentation			I	R	M
Insert or delete slides			I	R	M
Arrange objects on a slide			I	R	M
Save a presentation			I	R	M
Print a presentation as handouts				I/R	M
Add slide transitions to the slide show				I/R	M
Present presentation to an audience				I/R	M
Use text special effects such as WordArt				I/R	M
Insert graphics, clip art and/or digital pictures				I/R	M
Add animation to text and graphics				I/R	M
Edit color schemes and layout arrangement				I	R/M
Insert movie clips and recorded sound				I	R/M
Use presentation in a real world context to create outlines and slide shows				I	R/M

Standard 4
COMPUTER NETWORKING and TELECOMMUNICATION SKILLS

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Students will learn and be able to:		K	1	2	3-5	6-8
	Demonstrate appropriate log-in skills		I	I/R	M	M
	Refer to and utilize Acceptable Use Guidelines		I	I/R	M	M
	Demonstrate appropriate use of network printing			I/R	M	M
	Saving files to individual home directories			I/R	M	M
	Accessing information for a directory			I/R	M	M
	Access the Internet browser and maneuver around the WWW			I	R/M	M
	Use toolbar in the browser			I	R/M	M
	Enter an address to locate information				I/R	M
	Include electronic sources for bibliography				I/R	M

Standard 5
TECHNOLOGY PROBLEM-SOLVING, RESEARCH, DECISION-MAKING SKILLS

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

Students will learn and be able to:		K	1	2	3-5	6-8
	Locate information on a subject using electronic encyclopedias			I	R	M
	Locate information outside the library media center using online database			I	R	M
	Identify and differentiate between primary and secondary sources			I	R	M
	Access and retrieve information from a variety of sources				I/R	M
	Identify a variety of potential sources of information				I/R	M
	Search the Internet by utilizing search strategies: keywords/concepts				I/R	M
	Determine the reliability of information found on an Internet site				I/R	M
	Demonstrate information organization skills; use of cut/copy/paste and downloading features to take notes from Internet sites				I/R	M
	Differentiate among fact, opinion, propaganda, point of view, and bias of an Internet site				I/R	M

Utilize multiple search engines to locate information for research	I/R	M
Produce research project incorporating information retrieved from three or more different types of sources	I/R	M
Demonstrate information analysis skills by comparing two or more sources	I	R/M
Research and evaluate the accuracy and appropriateness of electronic information sources concerning real-world problems	I	R/M
Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems	I	R/M

Budget

The Huntington School District's budget for technology implementation from 2009-2012 is estimated to be:

	09-10	10-11	11-12
Hardware	$30,000	$30,000	$30,000
Software	$75,000	$75,000	$75,000
Personnel	$280,000	$287,000	$293,000
Contractual Expenses (inc. repairs, Internet filtering)	$110,000	$110,000	$110,000
BOCES (LAN support, internet access)	$210,374	$215,000	$220,000
Supplies	$90,000	$90,000	$90,000
Grants	-none-	-none-	-none-
Totals	$795,374	$807,000	$818,000

E-Rate funding will continue for ongoing allowable services. E-Rate funding for conversion to VOIP will be applied for in 09-10.

Professional Development

The ultimate goal of professional development is to improve student learning. To assist our teachers to incorporate technology to support dynamic instruction, the Huntington School District, will continue to provide an array of professional learning experiences. A full time Technology Coordinator will collaboratively work with the teachers to imbed digital content based on the learning needs of their students and infuse it into the curriculum.
In addition we will continue to support "Turnkey trainers", who will become the "go to" person in each building for immediate support. This approach will be implemented in the 2009-2010 school year to assist with the roll out of Discovery Streaming digital content. Trainers will demonstrate management and integration of streaming content during meetings and workshops.

Yearly Constants:

New Teachers

All newly hired teachers must partake in a Technology Orientation Program during their New Teacher Orientation. The workshop consists of the discussions of: (1) the Employee Acceptable Use Agreement, as well as a discussion of the Student Acceptable Use Agreement, (2) an overview of Technology Department, specifically personnel, ticketing procedures, and procedures for Instructional Assistance, and (3) an overview of the District's building specific infrastructure, including a brief discussion of standard hardware found in each building, and hardware and peripherals that can be signed out used on a scheduled basis. Hand on activities include proper login to the network, storage of files and file locations, and email access and use.

Current Teachers

All current teachers have the availability of the Instructional Technology Coordinator to aid them with technological learning. The Instructional Technology Coordinator, upon request of the building Principals and Department Chairpersons, provides group staff development on various instructional technologies. These group sessions occur during faculty meetings, Superintendent's Conference Days, grade level meetings, and staff development days.

The Instructional Technology Coordinator also schedules one-on-one or small group lessons during the school day, or before and after school days, upon request of the teachers. The Coordinator will also push into classrooms and work directly with students, as a means to model technology infused lessons.

Teachers also have the ability to partake in learning opportunities via the Huntington School District Teacher Center. Opportunities to do so range from group learning, hands on activities, and on-line self paced learning.

Additional Learning Opportunities

Creation of Collegial Circles:

- Lead by the Instructional Technology Coordinator, under the guidance and leadership of the Assistant Superintendent for Curriculum and Instruction
- Monthly meetings for teachers to discuss technological strategies, new technologies, effective uses of technology, success stories, etc

Focus of Staff Development topics to be taught:

- Using student data to influence instruction
- Advanced use of the Student Management System
- Differentiation of learning styles utilizing technology
- Hands on use of new technologies for classroom integration
- Bettering communication between the classroom and home

Staff Development will be an ever evolving process dependent upon the needs determined by yearly self assessments and feedback to the Technology Committee. This section is a living document that will be guided according to the needs and wants of the employees, the status of upgrades, budget considerations, and approval of proposals, resulting in yearly updates and resubmissions.

STAFFING

The Huntington School District Technology Department is divided between two administrative entities: the Assistant Superintendent for Business, Finance and Management Services and the Assistant Superintendent for Curriculum and Instruction.

The Office of Business, Finance, and Management Services oversees the day-to-day operation of technology within the school district, the budgeting and purchase of technological items, the communication of technical changes or updates, and the supervision of the computer network personnel.

District technological support consists of 1 Network Administrator, and 2 desktop technicians. The Network Administrator is granted a stipend to directly oversee the daily running of the department. This job role works directly with and reports directly to the Assistant Superintendent of Business, Finance and Management.

The Office of Curriculum and Instruction oversees the Instructional Technology Coordinator, whose position involves:

- direct interaction with teachers and administrators to maximize technological use.
- modeling technology lesson integration by means of working with students in grades K-12.
- working with library media specialists and computer aides (proposed teacher assistants) to incorporate group instructional methodologies.
- conducting of staff development by means of faculty meetings, staff development hours, and new teacher orientation.

Both offices work hand-in-hand with one another to meet the needs of the staff, students and teachers within the school district.

The Technology Department is also provided with a secretary who splits his/her time between the Office of Fine and Performing Arts, and the Office of Business, Finance and Management. Secretarial duties include the answering of the Technology Department phone line, logging in of computer tickets, and dispersing of such requests.

The District also supplies a stipend for 2 web publishers. Web publishers post district information to the District web site, as it is received from the District Superintendents, Department Directors, and building principals.

If necessity dictates, the District also allocates funds for LAN/WAN consulting. A consultant is supplied by an outside vendor contracted by BOCES. Needs for a consultant range from; troubleshooting of internal network issues, to roll outs of new technology.

Plan Evaluation

We see the Technology Plan as a living document determined by factors such as budget approval, approval of proposals, needs and wants of the faculty and staff, etc, will dictate how this plan is evaluated and altered.

The primary assessors and tailors of the plan will be the Technology Committee. They will receive evaluations from various sources:

- The Staff and Faculty Survey will provide insight as to the views of technology that are held by the individuals who are to use it. The Survey will contain questions about staff development opportunities, access to and availability of technology, and personal feelings about technology.
- Collegial Circles, lead by the Instructional Technology Coordinator, under the direction of the Assistant Superintendent of Curriculum, will provide guidance and direct feedback as to successes and needs for improvement.
- The Grade 8 Student Assessment of Skills will determine if students are reaching benchmark goals that will aid them for high school, higher learning, and career opportunities.

Technology Committee members will analyze results and gather information as to determine the strengths and weaknesses of the plan. Redirection of goals, introduction of new or additional goals, or implantation of new initiatives will be addressed and incorporated.

Appendix

Software Inventory

Software Inventory Jefferson Elementary School

Type of software	
Office 2003 (Word, Excel, Powerpoint, Access, Publisher)	All
Outlook 2003	Admin and Secretaries
Arthur's Computer Adventure	Classrooms, Lab
Bailey's Bookhouse	Classrooms, Lab
Chicka Chicka Boom Boom	Classrooms, Lab
Clifford Reading	Classrooms, Lab
Franklin's Reading World	Classrooms, Lab
Phonics 2	Classrooms, Lab
Stellaluna	Classrooms, Lab
Amazing Animals	Classrooms, Lab
I Love Math	Classrooms, Lab
Learn About Animals (Network)	Classrooms, Lab
Learn About Astonomy	Classrooms, Lab
Learn About Plants	Classrooms, Lab
Learn About Senses	Classrooms, Lab
Magic School Bus	Classrooms, Lab
Math Concepts	Classrooms, Lab
Millie's Math House	Classrooms, Lab
My First Amazing Science Explorer	Classrooms, Lab
Sammy's Science House	Classrooms, Lab
Trudy's Time and Place House	Classrooms, Lab
Jumpstart (Kindergarten, First, Second Third)	Classrooms, Lab
Encyclopedia Brittania	Web shortcut
Grolier Educational	Web shortcut
Swim into Social Studies 1, 2, 3	Classrooms, Lab
World Explorer	Classrooms, Lab
Arthur's Teacher Trouble	Classrooms, Lab
Just Granama and Me	Classrooms, Lab
Little Monster at School	Classrooms, Lab
Ruff's Bones	Classrooms, Lab
The Tortoise and the Hare	Classrooms, Lab
TLC Assignment and Tracking System (5 programs)--	Classrooms, Lab
1. Mavis Beacon Teaches Typing	Classrooms, Lab
2. Amazing Writing Machine	Classrooms, Lab
3. Storybook Weaver	Classrooms, Lab
4. Word Munchers Deluxe	Classrooms, Lab
5. Kid Pix Deluxe 3	Classrooms, Lab
Smart Board 10	Classrooms, Lab

Kidspiration	Classrooms, Lab
Type to Learn	Classrooms, Lab
The Print Shop	Classrooms, Lab
Math and Science Blaster	Classrooms, Lab
Hyperstudio 4	Classrooms, Lab
Benchmark Assessments	Reading
Rosetta Stone	ESL
Finale	Music
Musicus	Music
Tap It 1 and 2	Music
Clef Notes	Music
Boardmaker	Speech
Earobics 1 and 2	Speech
Auditory Memory	Speech
Concpets 1, 2, 3	Speech
WISC4 (scoring)	Psychologist
WPPSI III (scoring	Psychologist
Basc 2 Assist	Psychologist
Woodcock Johnson III	Psychologist

Software Inventory Washington Elementary School

Type of software	
Office 2003 (Word, Excel, Powerpoint, Access, Publisher)	All
Outlook	Admin and Secretaries
Arthur's Computer Adventure	Classrooms, Lab
Chicka Chicka Boom Boom	Classrooms, Lab
Franklin's Reading World	Classrooms, Lab
Bailey's Book House	Classrooms, Lab
Frippletown	Classrooms, Lab
Phonics2	Classrooms, Lab
Stellaluna	Classrooms, Lab
Amazing Animals	Classrooms, Lab
I Love Math	Classrooms, Lab
Learn About Animals -Network	Classrooms, Lab
Learn About Astronomy	Classrooms, Lab
Learn About Plants	Classrooms, Lab
Learn About Senses	Classrooms, Lab
Magic School Bus- Animals	Classrooms, Lab
Magic School Bus- Rain Forest	Classrooms, Lab
Magic School Bus- Solar System	Classrooms, Lab
Math Concepts 1-2-3	Classrooms, Lab
My Amazing Science Explorer	Classrooms, Lab
Sunbuddy Math Playhouse	Classrooms, Lab
Jumpstart (Kindergarten, First, Second Third)	Classrooms, Lab
Brittania 2002	Classrooms, Lab
Children's Encyclopedia	Classrooms, Lab
History Explorer	Classrooms, Lab
My First Incredible Amazing Dictionary	Classrooms, Lab
Swim Into Social Studies 1, 2, 3	Classrooms, Lab
USA Explorer	Classrooms, Lab
World Explorer	Classrooms, Lab
Smart Board	Classrooms, Lab
TLC Assignment and Tracking System (5 programs)--	Classrooms, Lab
1. Mavis Beacon Teaches Typing	Classrooms, Lab
2. Amazing Writing Machine	Classrooms, Lab
3. Storybook Weaver	Classrooms, Lab
4. Word Munchers Deluxe	Classrooms, Lab
5. Kid Pix Deluxe 3	Classrooms, Lab
Kidspiration	Classrooms, Lab

Type to Learn	Classrooms, Lab
The Print Shop	Classrooms, Lab
Math and Spelling Blaster	Classrooms, Lab
Hyperstudio 4	Classrooms, Lab
Boardmaker	Speech
Earobics 1 and 2	Speech
WISC-IV	Psychologist
Woodcock Johnson	Psychologist
Basc-2	Psychologist
Math Expressions-HM/Lesson Planner	Kindergarten
Math Expressions-Exam View 1	First Grade
Math Expressions-Exam View 2	Second Grade

Software Inventory Woodhull Intermediate School

Type of software	
Office 2003 (Word, Excel, Power Point, Publisher, Acccess)	All
Outlook	Admin and Secretaries
Front Page	Classrooms, Lab
3D Home Architect	Classrooms, Lab
Inspiration	Classrooms, Lab
Kidspiration	Classrooms, Lab
Hyperstudio 4	Classrooms, Lab
Math Blaster Pre-Algebra	Classrooms, Lab
Awesome Animated Monster	Classrooms, Lab
Hot Dog Stand	Classrooms, Lab
Learn About Astronomy	Classrooms, Lab
Learn About Plants	Classrooms, Lab
Learn About Senses	Classrooms, Lab
Math Concepts 2 and 3	Classrooms, Lab
Smart Board	Classrooms, Lab
The Print Shop	Classrooms, Lab
Type to Learn	Classrooms, Lab
Mavis Beacon Teaches Typing	Classrooms, Lab
Rosetta Stone	ESL
Finale	Music
Musicus	Music
Tap It 1 and 2	Music
Clef Notes	Music
Earobics 1 and 2	Speech
Boardmaker	Speech
Benchmark Assessments	Reading
Wisc-IV	Psychologist
Basc-2 Assist	Psychologist
Brief-SP	Psychologist
PDDBI (PDD Behavior Inventory Scoring Program	Psychologist
CAB (Clinical Assessment of Behavior	Psychologist

Software at Southdown & Flower Hill Elementary Schools

Amazing Animals
Amazing Writing Machine
Arthur's Computer Adventure
Bailey's Book House
Basc-2 Boardmaker
Brittania 2002
Chicka Chicka Boom Boom
Children's Encyclopedia
Earobics 1 and 2
Franklin's Reading World
Frippletown
History Explorer
I Love Math
Jumpstart (Kindergarten, First, Second Third)
Kid Pix Deluxe 3
Kidspiration
Learn About Animals -Network
Learn About Astronomy
Learn About Plants
Learn About Senses
Magic School Bus-Animals
Magic School Bus-Rain Forest
Magic School Bus-Solar System
Math and Spelling Blaster
My Amazing Science Explorer
My First Incredible Amazing Dictionary
Office 2003 (Word, Excel, Powerpoint, Access, Publisher, outlook)
Phonics2
Smart Board 10
Stellaluna
Storybook Weaver
Sunbuddy
Math Playhouse
The Print Shop
Type to Learn
USA Explorer
WISC-IV
Woodcock Johnson
World Explorer

Software at Jack Abrams Intermediate School

Math Blaster - Pre Algebra / Awesome Animated Monster Maker Math / Hot Dog Stand
Learn About Astronomy/Plants/Senses
MS Office 2003
Mavis Beacon 11
Inspiration 7
2003 World Book
Kid Pix
Type to Learn
Smart Board 9
Print Shop 15

Software Inventory at Finley Middle School

Office 2003 (Word, Excel, Powerpoint, Access, Publisher, outlook)
Type to learn
3D Home Architect
3D Home Architect Landscape
Photoshop
Front Page 2003
Adobe Illustrator
Windows Media Player
Mavis Beacon

Acceptable Use Policy

Huntington Union Free School District Computer/Internet Use
Acceptable Use Agreement

The School District recognizes that effective use of technology is important to our students and will be essential to them as adults. Consequently, the school system will provide access to various computerized information resources through the District's computer system (DCS hereafter) consisting of software, hardware, computer networks and electronic communications systems. This *may* include access to electronic mail, so called "on-line services" and the "Internet."

The DSC is for educational and/or research use only and must be consistent with the goals and purposes of the School District. Students are responsible for good behavior on school computer networks just as they are in a classroom or a school hallway.

In order to match electronic resources as closely as possible to the approved District curriculum, District personnel will review and evaluate Technological Resources in order to offer Internet materials, software programs, and computer equipment that comply with Board guidelines governing the selection of instructional materials. In this manner, staff will provide developmentally appropriate guides to students as they make use of telecommunications and electronic information resources to conduct research and other studies related to the District curriculum. As much as possible, access to the District's computerized information resources will be designed in ways that point students to those that have been reviewed and evaluated prior to use.

Internet Access

Internet access is available to students and teachers in the Huntington Union Free School District ("District"). The District and Western Suffolk BOCES ("BOCES") are very pleased to access this service and believe that the Internet offers vast, diverse and unique resources for both students and teachers. The goal of the Board of Education in providing this service to teachers is to promote educational excellence in schools by facilitating resource sharing, innovation and communication.

The Internet is an electronic highway connecting thousands of computers all over the world and millions of individual subscribers. The key concept underlying the Internet is interconnectivity, something that will allow administrators, teachers and, more importantly, students to access an unparalleled array of communication and information sources. Teachers as well as students (when *given* access *by teacher(s) in conjunction with academic objectives)* have access to general Internet tools utilizing the World Wide Web. These electronic search tools enable students and teachers to:

- Communicate with people all over the world
- Access information and news
- Access primary source documents

With access to computers and people all over the world also comes the availability of material

that may not be considered to be of educational value in the context of the school setting. We strongly believe that the valuable information and interaction available on this worldwide network far outweighs the possibility that users may procure material that is not consistent with the educational goals of the District. On a global network, it is impossible to control all materials and an industrious user may discover controversial information. As such, the District has taken precautions to restrict access to controversial materials by implementing the **iPrism** filtering system. Through this system, educationally inappropriate content areas will be blocked in all schools. These content areas include, but are not limited to adult/sexually explicit materials, criminal skills, drugs, tobacco, alcohol, gambling, hacking, violence, and weapons.* Specific blocked sites that are appropriate to teacher supervised curricular activities may be accessed with the approval of a system administrator.

Internet access is coordinated through a complex association of government agencies, and regional and state networks. In addition, the smooth operation of the network relies upon the proper conduct of the end users who must adhere to strict guidelines. These guidelines are provided here so that you are aware of the responsibilities you are about to acquire.

* Use of chat *e-mail, search engines or instant messaging capabilities may be allowed for educational purposes only under teacher supervision with the permission of a system administrator.*

Acceptable Use

The purpose of the Internet is to support research and education in and among academic institutions in the U.S. by providing access to unique resources and the opportunity for collaborative work. The use of network accounts must be in support of education and research and consistent with the educational objectives of the District. Use of another organization's network or computing resources must comply with the rules appropriate for that network. Transmission of any material in violation of any U.S. or state regulation is prohibited. This includes, but is not limited to: copyrighted materials; threatening or obscene material; expressions of bigotry, racism or hate; or material protected by trade secret. Plagiarism, or any direct use of a work without proper citation, is strictly prohibited. Use for commercial activities is generally not acceptable. Use for product advertisement or political lobbying is also prohibited.

Network Usage

Users are expected to abide by the generally accepted rules of network etiquette. The following specific activities shall be prohibited by users:

- Using District Technology to obtain, view, download, send, print, display, or otherwise gain access to or transmit materials that are unlawful, obscene, pornographic, or abusive.
- Use of obscene or vulgar language.

- Harassing, insulting, or attacking others.
- Damaging, disabling, or otherwise interfering with the operation of computers, computer systems, software or related equipment through physical action or by electronic means.
- Using unauthorized software on the DCS.
- Changing, copying, renaming, deleting, reading or otherwise accessing files or software not created by the user without express permission from the computer coordinator.
- Violating copyright law.
- Employing the DCS for commercial purposes, product advertisement or political lobbying.
- Disclosing an individual password to others or using others' passwords.
- Use of electronic mail (e-mail) containing inappropriate language, relating to or in support of illegal activities or containing material in violation of "Acceptable Use" as defined above.
- Transmitting material, information, or software in violation of any District policy or regulation, the school behavior code, and/or federal, state and local law or regulation.
- Revealing personal information about oneself or of other students including, but not limited to, disclosure of home address and/or telephone number.
- Use of the network in such a way that would disrupt the use of the network by other users.

Privileges

The use of Computerized Information Resources is a privilege, not a right, and inappropriate use will result in a cancellation of those privileges. Each user who receives an account will be responsible for that account and its usage. Network accounts are to be used only by the authorized owner of the account. System administrators may close an account at any time as required. The administration, faculty, and staff of the District may request systems administrators to deny, revoke or suspend specific user accounts.

Warranties

Neither BOCES nor the District makes any warranties of any kind, whether expressed or implied, for the service they are providing. BOCES and the District will not be responsible for any damages you suffer. BOCES and the District specifically deny any responsibility for the accuracy or quality of information obtained through these services.

Security

Security on any computer system is a high priority, especially when the system involves many users. Users of the DCS identifying a security problem on the District's system must notify the teacher in charge. A student is not to demonstrate the problem to other users. Attempts to log on to the DCS as a Computer Administrator or a Faculty Member will result in cancellation of user privileges. Any user identified as a security risk or having a history of problems with other computer systems may be denied access to the DCS. Further, any violations regarding the use and application of the DCS shall be reported by the student to the teacher in charge.

Vandalism

Vandalism will result in cancellation of privileges. Vandalism is defined as any malicious attempt to harm or destroy hardware, peripheral equipment, the data of another user, the Internet, or any above listed agencies or other networks that are connected to the Internet. This includes, but is not limited to the physical damage of equipment and uploading or creation of computer viruses.

Indirect Access

During school, teachers will guide students toward appropriate materials. Outside of school, parents/guardians bear responsibility for such guidance as they do with information sources such as television, telephones, movies, radio and other potentially offensive/controversial media. If a user or a student user's parent/guardian has a District network account, a non-district network account or any other account or program which will enable direct or indirect access to a District computer, any access to the DCS in violation of District policy and/or regulation may result in student discipline. Indirect access to a District computer shall mean using a non-district computer in a manner which results in the user gaining access to a District Computer, including access to any and all information, records or other material contained or stored in a District computer.

Sanctions

- Violations may result in suspension and/or revocation of student access to the DCS as determined in accordance with appropriate due process procedures.
- Additional disciplinary action may be determined at the building level in accordance with existing practices and procedures regarding inappropriate language or behavior, as well as federal state and local law.
- When applicable, law enforcement agencies may be involved.

Huntington Union Free School District Computer/Internet Use
Acceptable Use Agreement

Retention of Computer/Internet Use Agreements

Revised Computer/Internet Use Agreements received before **October 31, 2009** will be filed in the Student's Permanent Record, and will be honored throughout the student's stay in the Huntington Union Free School District. Changes to the original Computer/Internet Use Agreement signed by the Parent/Guardian will be initiated by the Parent/Guardian. Upon such request, District Personnel will immediately enforce the conditions of the new agreement.

Huntington Union Free School District Computer/Internet Use
Acceptable Use Agreement - Parental/Guardian Consent

As the parent/guardian of _____, I have been provided with a copy of the District's Computer/Internet Usage Policy.

I acknowledge that, unlike most traditional instructional or library media materials, the District's Computer System and Network will potentially allow my son/daughter student access to external computer networks not controlled by the School District. I understand that some materials available through these external computer networks may be inappropriate and objectionable

As a result of the above information, I _____

☐ **Allow my son/daughter access to both the Computer Network and the Internet**

By agreeing, I accept responsibility to set and convey standards for appropriate and acceptable use to my son/daughter when using the District's Computer System and Network or any other electronic media or communications. I agree to release the School District, the Board of Education, its agents and employees from any and all claims of any nature arising from my son/daughter's use of the DCS in any manner whatsoever. I agree that my son/daughter my have access to the DCS and I agree that this may include remote access from our home.

☐ **Allow my son/daughter access to the Computer Network, but not the Internet**

By agreeing, I accept responsibility to set and convey standards for appropriate and acceptable use to my son/daughter when using the District's Computer System and Network or any other electronic media or communications. I agree to release the School District, the Board of Education, its agents and employees form any and all claims of any nature arising from my son/daughter's use of the DCS in any manner whatsoever. I agree that my son/daughter my have access to the DCS and I agree that this may include remote access from our home.

☐ **Do not allow my son/daughter access to the Computer Network and the Internet**

Student Name _____

Parent/Guardian Signature _____

Date _____

El acuerdo del uso apropiado de la computadora/ la Internet del distrito escolar de Huntington

El distrito escolar reconoce que el uso efectivo de tecnología es importante para nuestros estudiantes y será esencial cuando sean adultos. Por consiguiente, el distrito ofrecerá acceso a varios recursos de información en la computadora por medio del sistema de computadoras del distrito (SCD de aquí en adelante) que consiste del software, el hardware, sistemas de computadoras y sistemas de comunicación electrónica. Esto puede incluir el acceso al correo electrónico y la Internet.

El SCD es solamente para el uso educativo y/o los estudios y debe ser consistente con las metas y propósitos del distrito escolar. Es la responsabilidad de los estudiantes de portarse bien al usar el sistema de computadoras tal como se deben portar en la clase y en el pasillo.

Para concordar los recursos electrónicos al currículo aprobado del distrito, el personal del distrito revisará y evaluará los recursos tecnológicos para ofrecer materiales de la Internet, programas de software y equipo de computadoras que están de acuerdo con las regulaciones de la Junta Educativa que gobierna la selección de materiales de instrucción. De esta manera, el personal podrá guiar los estudiantes apropiadamente cuando hacen uso de los recursos electrónicos para hacer investigaciones y otros estudios relacionados con el currículo del distrito. Trataremos de revisar todos los recursos electrónicos antes de que los estudiantes los usen.

El acceso a la Internet

Se les ofrece el acceso a la Internet a todos los estudiantes y maestros del distrito escolar de Huntington. El distrito y Western Suffolk BOCES ofrecen este servicio porque creen que la Internet ofrece recursos diversos para todos. Al proveer este servicio, la meta de la Junta Educativa es promover excelencia en las escuelas por medio de la comunicación.

La Internet es una carretera electrónica que conecta miles de computadoras del mundo y millones de personas. El concepto esencial de la Internet es que podemos estar conectados, algo que permitirá que administradores, maestros y estudiantes tengan acceso a información importante. Los maestros y los estudiantes (si su maestro(a) da permiso) tendrán acceso a la Internet. Las herramientas electrónicas de búsqueda permitirán que los estudiantes y maestros:

- se comuniquen con personas de todo el mundo
- obtengan información y noticias
- obtengan documentos de fuentes primarias

Al tener acceso a computadoras y personas de todo el mundo, hay mucha información que no es apropiada en el contexto de la escuela. Creemos que la información y la comunicación que tienen mucho valor en la Internet sobrepasan la posibilidad que los usuarios obtendrán material que no es consistente con las metas educativas del distrito. En un sistema mundial es imposible controlar todo el material y si alguien busca información con mucho empeño puede obtener material inapropiado. Por esta razón, el distrito ha tomado precauciones que limitan el acceso a la información cuestionable y ha

instalado el sistema de filtrar que se llama iPrism. Por medio de este sistema, material inapropiado será bloqueado en todas las escuelas. Este material incluye, pero no es limitado a: material explícito sexual, destrezas criminales, las drogas, el tabaco, el alcohol, juegos de riesgo, abrirse paso a la información personal de otras personas, la violencia y las armas. *Sitios específicamente bloqueados que son apropiados para actividades que los maestros supervisan pueden ser obtenidos con la aprobación del administrador del sistema.

El acceso a la Internet se coordina por medio de una asociación compleja de agencias gobernantes y sistemas regionales y estatales. Para que todo eso funcione bien, se requiere que los usuarios se portan bien y que sigan las reglas. Describimos estas reglas para que Ud. las sepa y las siga.

**Chat email, búsquedas o mensajes instantes se pueden usar si es para hacer algo educativo y si uno tiene el permiso del maestro(a) y del administrador del sistema.*

El uso apropiado

El propósito de la Internet es apoyar el estudio y la educación de las instituciones de los Estados Unidos, proveer acceso a los recursos electrónicos y dar la oportunidad de trabajar juntos. El uso de cuentas de sistemas debe apoyar la educación y los estudios y ser consistente con las metas educativas del distrito. El uso del sistema de otra organización o sus recursos debe cumplir con las reglas apropiadas de tal sistema. Se prohibe la transmisión de material que viola las reglas federales o estatales. Esto incluye pero no es limitado a: material que tiene la protección del derecho de autor; material que contiene obscenidades o amenazas; expresiones intolerantes, racistas u odiosas; o material protegido por secretos comerciales. El plagio o cualquier otro trabajo que no ha sido citado son prohibidos. El uso de la computadora para actividades comerciales en general no es aceptable. El uso para anunciar productos o presionar es prohibido.

El uso del sistema

Los usuarios deben cumplir con todas las reglas del sistema. Se prohiben las siguientes actividades:

- Usar la tecnología del distrito para obtener, ver, sacar, imprimir, mostrar o transmitir material que es ilegal, obsceno, pornográfico o abusivo.
- Usar lenguaje obsceno o grosero
- Molestar, insultar o atacar otras personas
- Dañar, incapacitar o interferir con la operación de computadoras, sistemas de computadoras, el software o equipo relacionado por medio de acción física o medios electrónicos.
- Usar el software sin autorización en el SCD.

- Cambiar, copiar, renombrar, borrar, leer u obtener acceso a archivos o el software no creado por el usuario sin el permiso del coordinador de computadoras.
- Violar la ley de registrar los derechos de autor.
- Usar el SCD para razones comerciales, anuncios de productos o presiones.
- Dar su clave a otros o usar la clave de otra persona.
- Usar correo electrónico (e-mail) que contiene lenguaje inapropiado que se trata de o apoya actividades ilegales o materiales que violan "El uso apropiado" que se define en este documento.
- Transmitir material, información o el software que viola las reglas del distrito, el código de comportamiento escolar y/o las reglas federales, estatales y locales.
- Revelar información personal de Ud. mismo o de otras personas que incluye pero no es limitado a la dirección de su casa y/o el número de teléfono.
- Usar el sistema de tal manera que perturba el uso del sistema de otras personas.

Los privilegios

El uso de los recursos de información computarizada es un privilegio, no es un derecho y el uso inapropiado resultará en la cancelación de dichos privilegios. Cada usuario que recibe una cuenta será responsable de mantener y usarla con cuidado. Las cuentas del sistema se usan solamente por personas autorizadas. Administradores del sistema pueden cancelar una cuenta en cualquier momento que sea necesario. La administración, el cuerpo docente y el personal del distrito pueden pedir que los administradores del sistema nieguen, revoquen o suspendan las cuentas de ciertos usuarios.

Las garantías

Ni BOCES, ni el distrito hacen garantías de ninguna forma, sea en forma expresa o implicada, por el servicio que ofrecen. BOCES y el distrito no son responsables por los daños que Ud. sufra. BOCES y el distrito específicamente no asumen ninguna responsabilidad por la exactitud o calidad de la información obtenida por medio de estos servicios.

La seguridad

La seguridad en cualquier sistema de computadoras es de suma prioridad, especialmente cuando tiene que ver con muchos usuarios. Los usuarios del SCD que identifican un problema de seguridad en el sistema del distrito deben notificar el maestro encargado. Un estudiante no debe de mostrar el problema a otros usuarios. Los intentos de conectarse al SCD como administrador de computadoras o un miembro del cuerpo docente resultarán en la cancelación de los privilegios del mismo usuario. Cualquier usuario identificado como riesgo de seguridad o que tiene una historia de problemas con otros sistemas de computadoras se le puede negar acceso al SCD. Además, cualquier violación con respecto al uso y aplicación del SCD debe ser reportado por el estudiante al maestro encargado.

El Vandalismo

El acuerdo del uso apropiado de la computadora/ la Internet del distrito escolar de Huntington

El vandalismo resultará en la cancelación de privilegios. Se define el vandalismo como un intento malicioso de dañar o destruir el hardware, el equipo, la información de otro usuario, la Internet o cualquier de las agencias u otros sistemas nombrados en este documento que son conectados a la Internet. Esto incluye, pero no es limitado al daño físico del equipo y el sacar o el crear víruses en las computadoras.

El acceso indirecto

Durante la escuela, los maestros guiarán los estudiantes hacia materiales apropiados. Fuera de la escuela, los padres/guardianes tienen la responsabilidad de tal guía tal como la tienen con cosas como la televisión, el teléfono, las películas, el radio u otras formas que tienen el potencial de ser ofensivo/controvertido. Si un usuario o el padre/madre de un estudiante tienen una cuenta del sistema del distrito, una cuenta que no es del distrito o cualquier otra cuenta o programa que permite acceso directo o indirecto a las computadoras del distrito, acceso al SCD que viola las reglas del distrito puede resultar en la disciplina del estudiante. Acceso indirecto a una computadora del distrito significará el usar una computadora que no es del distrito en una manera que permitirá al usuario acceso a una computadora del distrito, incluyendo acceso a toda clase de información que existe dentro de dicha computadora.

Las sanciones

- Violaciones pueden resultar en una suspensión y/o revocación del acceso del estudiante al SCD como ha sido determinado de acuerdo con los procedimientos apropiados.
- Acciones adicionales de disciplina pueden ser determinados al nivel de la escuela de acuerdo con las reglas actuales y procedimientos con respecto al lenguaje o comportamiento inapropiados, y también con las leyes federales y locales.
- Cuando sea pertinente, las agencias de la imposición de leyes pueden ser contactados.

El acuerdo del uso apropiado de la computadora/ la Internet del distrito escolar de Huntington

La retención de los acuerdos del uso de la computadora/la Internet

Los acuerdos revisados del uso de la computadora/la Internet recibidos antes del 31 de octubre del 2009 serán archivados en el record permanente del estudiante y se los reconocerá durante sus años escolares en el distrito escolar de Huntington. Los cambios al acuerdo original del uso de computadoras/la red de Internet que firman los padres/guardianes será iniciado por ellos mismos. Al pedirlo, el personal del distrito impondrá las condiciones del nuevo acuerdo.

El consentimiento de padres/guardianes

Como padre/madre/guardián de _____, he recibido una copia del acuerdo del uso de computadoras/la Internet del distrito.

Yo reconozco que, distinto de las materiales tradicionales de instrucción o de la biblioteca, el sistema de computadoras del distrito puede permitir que mi hijo(a) obtenga acceso a sistemas de computadoras que no son controlados por el distrito. Entiendo que algunos materiales disponibles por medio de estos sistemas externos pueden ser inapropiados y ofensivos.

Después de leer la información de arriba, yo _____

☐ **Autorizo que mi hijo(a) tenga acceso al sistema de computadoras y a la Internet.**
Al estar de acuerdo, acepto la responsabilidad de establecer y mantener estandartes de uso apropiado y aceptable para mi hijo(a) cuando usa el sistema de computadoras o cualquier otra manera de comunicarse. Estoy de acuerdo de que el distrito escolar, la Junta Educativa, sus agencias y empleados sean renunciados a las declaraciones por cualquier razón que se dan debido a que mi hijo(a) use el SCD de cualquier manera. Estoy de acuerdo con que mi hijo(a) tenga acceso al SCD lo cual puede incluir el acceso de mi casa.

☐ **Autorizo que mi hijo(a) tenga acceso al sistema de computadoras, pero no a la Internet.**
Al estar de acuerdo, acepto la responsabilidad de establecer y mantener estandartes de uso apropiado y aceptable para mi hijo(a) cuando usa el sistema de computadoras o cualquier otra manera de comunicarse. Estoy de acuerdo de que el distrito escolar, la Junta Educativa, sus agencias y empleados sean renunciados a las declaraciones por cualquier razón que se dan debido a que mi hijo(a) use el SCD de cualquier manera. Estoy de acuerdo con que mi hijo(a) tenga acceso al SCD lo cual puede incluir el acceso de mi casa.

☐ **No autorizo que mi hijo(a) tenga acceso al sistema de computadoras, ni a la Internet.**

Nombre del estudiante _____

Firma del padre/madre/guardián _____

Fecha _____

Standards

The ISTE National Educational Technology Standards (NETS•S) and Performance Indicators for Students

1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

a. apply existing knowledge to generate new ideas, products, or processes.
b. create original works as a means of personal or group expression.
c. use models and simulations to explore complex systems and issues.
d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
c. develop cultural understanding and global awareness by engaging with learners of other cultures.
d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

a. plan strategies to guide inquiry.
b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.
b. plan and manage activities to develop a solution or complete a project.
c. collect and analyze data to identify solutions and/or make informed decisions.
d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.
b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c. demonstrate personal responsibility for lifelong learning.
d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

a. understand and use technology systems.
b. select and use applications effectively and productively.
c. troubleshoot systems and applications.
d. transfer current knowledge to learning of new technologies.

The ISTE National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers

Effective teachers model and apply the National Educational Technology Standards for Students (NETS•S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators. Teachers:

1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- **a.** promote, support, and model creative and innovative thinking and inventiveness
- **b.** engage students in exploring real-world issues and solving authentic problems using digital tools and resources
- **c.** promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes
- **d.** model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- **a.** design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
- **b.** develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress
- **c.** customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources
- **d.** provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching

3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- **a.** demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations
- **b.** collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation
- **c.** communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats
- **d.** model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- **a.** advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources
- **b.** address the diverse needs of all learners by using learner-centered strategies and providing equitable access to appropriate digital tools and resources
- **c.** promote and model digital etiquette and responsible social interactions related to the use of technology and information
- **d.** develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools

5. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- **a.** participate in local and global learning communities to explore creative applications of technology to improve student learning
- **b.** exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others
- **c.** evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning
- **d.** contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community

An ISTE Crosswalk by Six Major Categories

International Society of Technology for Education's
Education Technology Learning Standards and Performance Indicators***
associated with suggested
New York State Learning Standards and Performance Indicators
by ISTE's Six Major Categories

New York State Education Department staff and educators from across New York State share these beliefs: ( )

- ✓ All students are able to achieve competency in the presence of skilled instruction, adequate time for learning, varied and/or specialized resources, and additional support as needed
- ✓ Recognizes that equity in and access to technology and other resources must be ensured at State, regional, and local levels and enhances the development of critical literacy competencies
- ✓ Recognizes that teachers in all content areas share responsibility for the development of reading, writing, listening and speaking competencies

** A learning standard is an established level or degree of quantity, value, or quality. New York State learning standards are defined as the knowledge, skills, and understandings that individuals can, and do, habitually demonstrate over time--as a result of instruction and experience.*

****Performance indicators are defined as** what students need to know and be able to do as a result of skilled instruction.*

This crosswalk and all New York State Learning Standards respect the tradition of local choice in New York State that empowers educators to select texts, identify products, and use a rich array of instructional strategies and activities to meet student learning needs. This crosswalk is designed to provide assistance, while allowing for creativity, in the development of local instructional materials.

ISTE NETS for students – Common Understanding and performance Indicators	NYS Learning Standards – Technology related Performance Indicators

The numbers in parentheses after each item identify the standards (1–6) most closely linked to the activity described. Each activity may relate to one indicator, to multiple indicators, or to the overall standards referenced. The categories are:

1. **Creativity and Innovation**
2. **Communication and Collaboration**
3. **Research and Information Fluency**
4. **Critical Thinking, Problem Solving, and Decision Making**
5. **Digital Citizenship**
6. **Technology Operations and Concepts**

1. Creativity and Innovation

A. Apply existing knowledge to generate new ideas, products, or processes. **B. Create original works as a means of personal or group extension.** **C. Use models and simulations to explore complex systems, and issues.** **D. Identify trends and forecast possibilities.**	
Prior to the completion of Grade 2, students will: • Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (1, 2) • Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1, 3, 4) • Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. (1, 3, 4)	**ELA Standard 1:** Kindergarten **Reading** • Locate and use classroom and library media Center resources to acquire information, with assistance. **ELA Standard 1:** Pre-kindergarten **Reading** • Read familiar informational texts with repetitive language and simple illustrations to begin to collect data, facts, and ideas, with assistance. • Interpret information represented in pictures and illustrations. **ELA Standard 2:** Grade 2 **Listening** • Identify elements of character, plot, and setting to understand the author's message, with assistance. • Connect literary texts to previous life experiences to enhance understanding. • Use note taking and graphic organizers to record and organize information and ideas recalled from stories read aloud, with

	assistance. **Math Standard 3:** Grades K-2 Reasoning and Proof Strand: • Recognize reasoning and proof as fundamental aspects of mathematics; • Make and investigate mathematical conjectures; • Develop and evaluate mathematical arguments and proofs; • Elect and use various types of reasoning and methods of proof.
Prior to the completion of Grade 5, students will: • Produce a media-rich digital story about a significant local event based on first-person interviews. (1, 2, 3, 4) • Use digital-imaging technology to modify or create works of art for use in a digital presentation. (1, 2,6)	**ELA Standard 1:** Grade 5 **Speaking** • Interview peers. **ELA Standard 3:** Grade 5 **Writing** • Analyze the impact of an event or issue from personal, peer group, and school community perspectives. **ELA Standard 1:** Grade 6 **Reading** • Distinguish between fact and opinion; • Identify information that is implied rather than stated. **Math Standard 3:** Grades 3-5 Reasoning and Proof Strand • Recognize reasoning and proof as fundamental aspects of mathematics; • Make and investigate mathematical conjectures; • Develop and evaluate mathematical arguments and proofs; • Elect and use various types of reasoning and methods of proof.
Prior to the completion of grade 8, students will: • Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1, 2)	**Math Standard 3:** Grades 5-8 Reasoning and Proof Strand • Recognize reasoning and proof as fundamental aspects of mathematics; • Make and investigate mathematical conjectures;

• Create original animations or videos documenting school, community, or local events. (1, 2, 6) • Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1, 4) • Integrate a variety of file types to create and illustrate a document or presentation. (1, 6)	• Develop and evaluate mathematical arguments and proofs; • Elect and use various types of reasoning and methods of proof. **MST Standard 1: Analysis, Inquiry and Design** Intermediate • Locate and utilize a range of printed, electronic, and human information resources to obtain ideas. **MST: Standard 2: Information Systems** Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources. • Collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **The Arts: Standard 2** Intermediate (Dance) • Demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc. Intermediate (Music) • Use traditional or nontraditional sound sources, including electronic ones, in composing and performing simple pieces. • Use current technology to create, produce and record/playback music. Intermediate (Visual Arts) • Use the computer and electronic media as designing tools and to communicate visual ideas. **MST Standard 5: Technology** Intermediate • Assemble a complete computer system use a computer system to acquire

Prior to the completion of grade 12, students will: • Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1, 4) • Create and publish an online art gallery with examples and commentary that demonstrate an understanding of different historical periods, cultures, and countries. (1, 2) • Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources. (1, 5)	information from the Internet. • Use computer hardware and software to create prototypical designs and models . • Use a computer system to monitor and control external events and/or systems. **ELA Standard 3:** Grade 9 **Speaking** • Express opinions or make judgments about ideas, information, experiences, and issues in literary and historical articles. **ELA Standard 3:** Grade 9 **Reading** • Analyze and evaluate nonfiction texts. **ELA Standard 3:** Grade 10 **Writing** • Develop critiques from more than one perspective, such as historical and cultural. **ELA Standard 3:** Grade 11 **Speaking** • Modify content and presentation strategies on the basis of audience response during presentation. **ELA Standard 1:** Grade 11 **Reading** • Analyze and synthesize information from different sources, making connections and showing relationships to other texts, ideas, subjects and to the world at large. **ELA Standard 1:** Grade 11 **Speaking** • Prepare and give presentations on a range of informational topics. **ELA Standard 1:** Grade 12 **Listening** • Interpret and analyze information from media presentations, such as documentary films, news broadcasts, taped interviews, and debates.

	Math Standard 3: Grades 9-12 Reasoning and Proof Strand • Recognize reasoning and proof as fundamental aspects of mathematics; • Make and investigate mathematical conjectures; • Develop and evaluate mathematical arguments and proofs; • Elect and use various types of reasoning and methods of proof.

2. Communication and Collaboration

A. Interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media. **B. Communicate information and ideas effectively to a multiple audiences using a variety of media and formats.** **C. Develop cultural understanding and global awareness by engaging with learners of other cultures.** **D. Contribute to project teams to produce original works or solve problems**	
Prior to the completion of grade 2, students will: • Engage in learning activities with learners from multiple cultures through e-mail and other electronic means. (2, 6) • In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area (1, 2, 6)	**ELA Standard 4:** Kindergarten **Writing** • Share writings and drawings with peers or adults; for example, write/draw with a partner or in a cooperative group. • Respect the age, gender, and culture of the recipient, with assistance. • Write friendly letters to others. • Maintain a portfolio of writings and drawings for social interaction, with assistance. **Math Standard 3:** Grades K-2 Communications Strand • Organize and consolidate their mathematical thinking through communication; Communicate their mathematical thinking coherently and clearly to peers, teachers, and others; • Analyze and evaluate the mathematical thinking and strategies of others; • Use the language of mathematics to express mathematical ideas precisely.
Prior to the completion of grade 5, students will: • Produce a media-rich digital story about a significant local event based on first-person interviews. (1, 2, 3, 4) • Use digital-imaging technology to modify or create works of art for use in a digital	**ELA Standard 1:** Grade 3 **Writing** • Produce clear, well-organized reports and accounts that demonstrate understanding of a topic. **Math Standard 3:** Grades 3-5

presentation. (1, 2, 6) **Prior to the completion of Grade 8, students will:** • Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1, 2) • Create original animations or videos documenting school, community, or local events. (1, 2, 6) • Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1, 4) • Participate in a cooperative learning project in an online learning community. (2) • Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5)	Communications Strand • Organize and consolidate their mathematical thinking through communication; • Communicate their mathematical thinking coherently and clearly to peers, teachers, and others; • Analyze and evaluate the mathematical thinking and strategies of others; • Use the language of mathematics to express mathematical ideas precisely. **ELA Standard 3:** Grade 7 **Writing** • Present a subject from more than one perspective by using various resources. **ELA Standard 4:** Grade7 **Writing** • Respect the age, gender, social position , and cultural. **Math Standard 3:** Grades 6-8 Communications Strand • Organize and consolidate their mathematical thinking through communication; • Communicate their mathematical thinking coherently and clearly to peers, teachers, and others; • Analyze and evaluate the mathematical thinking and strategies of others; • Use the language of mathematics to express mathematical ideas precisely. **MST Standard 2: Information Systems** Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **MST Standard 2: Information Systems**

	Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **MST Standard 5: Technology** Intermediate • Assemble a complete computer system. • Use a computer system to acquire information from the Internet. • Use computer hardware and software to create prototypical designs and models. • Use a computer system to monitor and control external events and/or systems. **CDOS Standard 3a** Intermediate • Select and use appropriate technology to complete a task. • Select and communicate information in an appropriate format (e.g., oral, written, graphic, pictorial, multimedia). **Health, Phys. Ed. And FACS Standard 3** Intermediate (Health) • Analyze how media and technology influence the selection of health information, products and services.
Prior to the completion of grade 12, students will: • Create and publish an online art gallery with examples and commentary that demonstrate an understanding of different historical periods, cultures, and countries. (1, 2) • Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions. (1, 2, 3, 4)	**ELA Standard 3:** Grade 9 **Speaking** • Present content that is clearly organized and based on knowledge of audience needs and interests. • Present arguments from different perspectives. **ELA Standard 1:** Grade 9

	Writing • Use charts, graphs, or diagrams to illustrate informational texts. **ELA Standard 2:** Grade 10 **Reading** • Read, view, and respond independently to literary works that represent a wide range of social, historical, and cultural perspectives. **ELA Standard 1:** Grade 10 **Writing** • Use charts, graphs, or diagrams to illustrate informational texts. **ELA Standard 1:**Grade 10 **Speaking** • Prepare and give presentations to a variety of audiences on a range of informational topics. **ELA Standard 1:** Grade 11 **Writing** • Analyze and integrate data, facts, and ideas to communicate information. **ELA Standard 4:** Grade 11 **Speaking** • Respect the age, gender, and cultural traditions of the listener. **ELA Standard 4:** Grade 12 **Speaking** • Respect the age, gender, social position, and cultural traditions of the listener. **ELA Standard 4:** Grade 12 **Listening** • Respect the age, gender, social position, and cultural traditions of the listener. **Math Standard 3:** Grades 9-12 Communications Strand • Organize and consolidate their mathematical thinking through communication; • Communicate their mathematical thinking coherently and clearly to peers, teachers, and

	others; • Analyze and evaluate the mathematical thinking and strategies of others; • Use the language of mathematics to express mathematical ideas precisely.

3. Research and Information Fluency

A. Plan strategies to guide inquiries. **B. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.** **C. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.** **D. Process data and report results.**	
Prior to the completion of grade 2, students will: • Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1, 3, 4) • Find and evaluate information related to a current or historical person or event using digital resources. (3) • Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. (1, 3, 4)	**ELA Standard 3:** Grade 1 **Reading** • Identify, explain, and evaluate ideas, themes, and experiences from texts and performances. **ELA Standard 1:** Grade 1 **Speaking** • Report information to peers and familiar adults. **Math Standard 3:** Grade K-2 Connections Strand • Recognize and use connections among mathematical ideas; • Understand how mathematical ideas interconnect and build on one another to produce a coherent whole; • Recognize and apply mathematics in contexts outside of mathematics.
Prior to the completion of grade 5, students will: • Produce a media-rich digital story about a significant local event based on first-person interviews. (1, 2, 3, 4) • Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3, 4) • Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6)	**ELA Standard 1:** Grade 3 **Writing** • Produce clear, well-organized reports and accounts that demonstrate understanding of a topic. **ELA Standard 3:** Grade 3 **Reading** • Evaluate the content by identifying - the author's purpose - statements of fact, opinion, and exaggeration, with assistance.

Prior to the completion of grade 8, students will: • Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3) • Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. (3, 4, 6) • Select and use the appropriate tools and digital resources to accomplish a variety of tasks and to solve problems. (3, 4, 6) • Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5)	**Math Standard 3:** Grade 3-5 Connections Strand • Recognize and use connections among mathematical ideas; • Understand how mathematical ideas interconnect and build on one another to produce a coherent whole; • Recognize and apply mathematics in contexts outside of mathematics. **ELA Standard 1:** Grade 5 **Reading** • Read to collect and interpret data, facts, and ideas from multiple sources. **ELA Standard 1:** Grade 8 **Reading** • Distinguish between relevant and irrelevant Information. ELA Standard 3: Grade 8 **Writing** • Present clear analyses, using examples, details, and reasons from text. **ELA Standard 4:** Grade 8 **Writing** • Share the process of writing with peers and adults. **Social Studies Standard 4** Intermediate • Identify and collect economic information from....computer databases... • Present economic information by using media... **CDOS Standard 3a** Intermediate • Select and use appropriate technology to complete a task. • Select and communicate information in an appropriate format (e.g., oral, written, graphic, pictorial, multimedia).

	MST Standard 2: Information Systems Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources. • Collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **Health, Phys. Ed. And FACS Standard 3** Intermediate (Health) • Analyze how media and technology influence the selection of health information, products and services. **Math Standard 3:** Grade 6-8 Connections Strand • Recognize and use connections among mathematical ideas; • Understand how mathematical ideas interconnect and build on one another to produce a coherent whole; • Recognize and apply mathematics in contexts outside of mathematics
Prior to the completion of grade 12, students will: • Select digital tools or resources to use for a real-world task and justify the selection based on their efficiency and effectiveness. (3, 6) • Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions. (1, 2, 3, 4) • Model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources. (3, 5)	**ELA Standard 1:** Grade 9 **Reading** • Locate and use school and public library resources for information and research. **ELA Standard 3:** Grade 9 **Speaking** • Present content that is clearly organized and based on knowledge of audience needs and interests. **ELA Standard 3:** Grade 9 **Speaking** • Present arguments from different perspectives.

	ELA Standard 1: Grade 10 **Reading** • Analyze information from different sources, making connections and showing relationships to other texts, ideas, and subjects. **ELA Standard 3:** Grade 11 **Writing** • Analyze a wide range of texts using resources such as recognized experts, knowledge from school subjects, and reading, and personal knowledge. **ELA Standard 1:** Grade 12 **Reading** • Locate and use school, public, academic, and special library resources for information and research. **Math Standard 3:** Grade 9-12 Connections Strand • Recognize and use connections among mathematical ideas; • Understand how mathematical ideas interconnect and build on one another to produce a coherent whole; • Recognize and apply mathematics in contexts outside of mathematics **CDOS Standard 2** Commencement • Research, interpret, analyze, and evaluate information and experiences as related to academic knowledge and technical skills when completing a career plan. **Social Studies Standard 3** Commencement- • Plan, organize, and present geographic research projects. • Analyze geographic information by developing and testing inferences and hypotheses, and formulating conclusions from a variety of sources.

4. Critical Thinking, Problem –Solving & Decision-Making

A. Identify and define authentic problems and significant questions for investigation. **B. Plan and manage activities to develop a solution or complete a project.** **C. Collect and analyze data to identify solutions and/or make informed decisions.** **D. Use multiple processes and diverse perspectives to explore alternative solutions.**	
Prior to the completion of grade 2, students will: • identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1, 3, 4) • Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. (1, 3, 4) • Independently apply digital tools and resources to address a variety of tasks and problems. (4, 6)	**ELA Standard 2**: Grade 1 **Writing** • Write to respond to text to - express feelings about characters or events in one or more stories. - describe characters, settings, or events. - list a sequence of events in a story - retell a story, using words. - identify the problem and solution in a simple story. **ELA Standard 2:** Grade 2 **Reading** • Use graphic organizers to record significant details to compare and contrast characters and events in stories, with assistance. **Math Standard 3:** Grade K-2 Problem Solving strand • recognize reasoning and proof as fundamental aspects of mathematics; • make and investigate mathematical conjectures; • develop and evaluate mathematical arguments and proofs; • select and use various types of reasoning and methods of proof.
Prior to the completion of grade 5, students will: • Produce a media-rich digital story about a	**ELA Standard 1:** Grade 3 **Writing** • Produce clear, well-organized reports and

significant local event based on first-person interviews. (1, 2, 3, 4) • Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3, 4) • Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6) • Identify and investigate a global issue and generate possible solutions using digital tools and resources. (3, 4) • Conduct science experiments using digital instruments and measurement devices. (4, 6) • Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support. (4, 6)	accounts that demonstrate understanding of a topic. **ELA Standard 3:** Grade 3 **Reading** • Evaluate the content by identifying - the author's purpose. - statements of fact, opinion, and exaggeration, with assistance. **ELA Standard 3:** Grade 3 **Writing** • Use a variety of prewriting tools to organize ideas and information. **ELA Standard 1: Grade 5** **Reading** • Read to collect and interpret data, facts, and ideas from multiple sources. **Math Standard 3:** Grade 3-5 Problem Solving strand • recognize reasoning and proof as fundamental aspects of mathematics; • make and investigate mathematical conjectures; • develop and evaluate mathematical arguments and proofs; • select and use various types of reasoning and methods of proof.
Prior to the completion of grade 8, students will: • Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1, 4) • Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5) • Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. • Select and use the appropriate tools and	**ELA Standard 1:** Grade 6 **Writing** • Take notes and organize relevant data, facts and ideas. **ELA Standard 1:** Grade 7 **Listening** • Make, confirm or revise predictions by distinguishing between relevant and irrelevant oral information. **Math Standard 3:** Grade 6-8 Problem Solving strand • recognize reasoning and proof as fundamental aspects of mathematics;

digital resources to accomplish a variety of tasks and to solve problems. (3, 4, 6) • Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5) • Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4, 6)	• make and investigate mathematical conjectures; • develop and evaluate mathematical arguments and proofs; • select and use various types of reasoning and methods of proof **MST Standard 1: Analysis, Inquiry and Design** Intermediate • Locate and utilize a range of printed, electronic, and human information resources to obtain ideas. **MST Standard 2: Information Systems** Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base soft ware, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources. • Collect data from probes to measure events and phenomena using simple modeling programs to make predictions. **The Arts Standard 2** Intermediate (Dance) • Demonstrate knowledge of sources for understanding dance technologies: live, print, video, computer, etc. Intermediate (Music) • Use traditional or nontraditional sound sources, including electronic ones, in composing and performing simple pieces. • Use current technology to create, produce and record/playback music. Intermediate (Visual Arts) • Use the computer and electronic media as designing tools and to communicate visual ideas. **MST Standard 5: Technology** Intermediate

	• Assemble a complete computer system. • Use a computer system to acquire information from the Internet. • Use computer hardware and software to create prototypical designs and models. • Use a computer system to monitor and control external events and/or systems.
Prior to the completion of grade 12, students will: • Employ curriculum-specific simulations to practice critical-thinking processes. (1, 4) • Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions. (1, 2, 3, 4) • Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4, 5, 6) • Configure and troubleshoot hardware, software, and network systems to optimize their use for learning and productivity. (4, 6)	**ELA Standard 1:** Grade 9 **Writing** • Use a range of organizational strategies to present information. **ELA Standard 3:** Grade 10 **Speaking** • Present reasons, examples, and details from sources cited to defend opinions and judgments. **ELA Standard 3:** Grade 11 **Writing** • Analyze a wide range of texts using resources such as recognized experts, knowledge from school subjects and reading, and personal experience. **ELA Standard 1:** Grade 11 **Reading** • Analyze and synthesize information from different sources, making connections and showing relationships to other texts, ideas, and subjects and to the world at large. **ELA Standard 1:** Grade 12 **Speaking** • Prepare and give presentations to a variety of audiences on a range of informational topics, using a variety of techniques, such as multimedia, group presentations, and dramatic approaches. **Math Standard 3:** Grade 9-12 Problem Solving strand • recognize reasoning and proof as fundamental aspects of mathematics; • make and investigate mathematical

	conjectures; • develop and evaluate mathematical arguments and proofs; • select and use various types of reasoning and methods of proof. **Social Studies Standard 3:** Commencement • Develop and test generalizations and conclusions and pose analytical questions based on results of geographic inquiries. **CDOS Standard 3a:** Commencement • Use a combination of techniques to read or listen to complex information and analyze what has been said and convey information confidently and coherently in written or oral form; analyze and solve mathematical problems requiring use of multiple computational skills.

5. Digital Citizenship

A. Advocate and practice safe legal, and responsible use of information and technology. **B. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.** **C. Demonstrate personal responsibility for life long learning.** **D. Exhibit leadership for digital citizenship.**	
Prior to the completion of grade 2, students will: • Demonstrate the safe and cooperative use of technology. (5)	ELA Standard 1: Pre-kindergarten **Reading** • Locate and use classroom and library media center resources to acquire information, with assistance. **ELA Standard 1**: Grade 2 **Speaking** • Present a short oral report, using at least one source of information, such as a person, book, magazine article, television program or electronic text.
Prior to the completion of grade 5, students will: • Practice injury prevention by applying a variety of ergonomic strategies when using technology. (5) • Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5, 6)	**ELA Standard 3:** Grade 3 **Speaking** • Express an opinion about school and community issues. • Analyze and evaluate new ideas by using personal experiences and knowledge. • Express an opinion, supporting it with text, about the accuracy of the content of literary works. • Speak with appropriate rate and volume for the audience. • Take turns speaking in a group. **ELA Standard 4:** Grade 4 **Speaking** • Use the rules of conversation, such as avoid interrupting and respond respectfully.
Prior to the completion of grade 8, students will: • Use collaborative electronic authoring tools	**ELA Standard 3:** Grade 7 **Writing** • Present a subject from more than one

to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5)	perspective using various resources. **ELA Standard 3:** Grade 8 **Speaking** • Contribute to group discussions by offering comments to clarify and interpret ideas and information. **MST Standard 2: Information Systems** Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources. • Collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **MST Standard 5: Technology** Intermediate • Use a computer system to acquire information from the Internet . • Use computer hardware and software to create prototypical designs and models. • Use a computer system to monitor and control external events and/or systems. **CDOS Standard 3a** Intermediate • Select and use appropriate technology to complete a task. • Select and communicate information in an appropriate format (e.g., oral, written, graphic, pictorial, multimedia). **Health, Phys. Ed. And FACS Standard 3** Intermediate (Health) • Analyze how media and technology influence the selection of health information, products and services.
Prior to the completion of grade 12, students will:	**ELA Standard 1:** Grade 9 **Reading**

• Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4, 5, 6) • Design a Web site that meets accessibility requirements. (1, 5) • Model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources. (3, 5) • Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources. (1, 5)	• Locate and use school and public library resources for information and research. **ELA Standard 4:** Grade 10 **Listening** • Respect the age, gender, social position, and cultural traditions of the speaker. **ELA Standard 1:** Grade 11 **Speaking** • Prepare and give presentations on a range of informational topics. **ELA Standard 2:** Grade 12 **Writing** • Use resources such as personal experience, knowledge from other content areas, and independent reading to create literary, interpretative, and responsive text.

6. Technology Operations and Concepts

A. Understand and use technology systems. **B. Select and use applications effectively and productively.** **C. Troubleshoot systems and applications.** **D. Transfer current knowledge to learning of new technologies.**	
Prior to the completion of grade 2, students will: • Engage in learning activities with learners from multiple cultures through e-mail and other electronic means. (2, 6) • In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (1, 2, 6) • Independently apply digital tools and resources to address a variety of tasks and problems. (4, 6) • Communicate about technology using developmentally appropriate and accurate terminology. (6) • Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and Web sites. (6)	**ELA Standard 1**: Grade 2 **Writing** • Use spelling resources, such as dictionaries, word walls, and/or computer software to spell correctly. **ELA Standard 2**: Grade 2 **Writing** • Use a computer to create, research and interpret literary texts. **ELA Standard 2**: Grade 2 **Reading** • Read print-based and electronic literary texts silently on a daily basis for enjoyment. **Math Standard 3:** Grades K-2 Representation Strand • Create and use representations to organize, record, and communicate mathematical ideas • Select, apply, and translate among mathematical representations to solve problems. • Use representations to model and interpret physical, social, and mathematical phenomena.
Prior to the completion of grade 5, students will: • Use digital-imaging technology to modify or create works of art for use in a digital presentation. (1, 2, 6) • Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6) • Conceptualize, guide, and manage individual or group learning projects using	**ELA Standard 3:** Grade 3 **Speaking** • Express an opinion about school and community issues. • Analyze and evaluate new ideas by using personal experiences and knowledge. • Express an opinion, supporting it with text, about the accuracy of the content of literary works. • Speak with appropriate rate and volume for

digital planning tools with teacher support. (4, 6) • Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5, 6) • Apply previous knowledge of digital technology operations to analyze and solve current hardware and software problems. (4, 6)	the audience • Take turns speaking in a group. **ELA Standard 4:** Grade 4 **Speaking** • Use the rules of conversation, such as avoid interrupting and respond respectfully. **ELA Standard 1:** Grade 5 **Reading** • Read to collect and interpret data, facts, and ideas from multiple sources. **Math Standard 3:** Grades 3-5 Representation Strand • Create and use representations to organize, record, and communicate mathematical ideas. • Select, apply, and translate among mathematical representations to solve problems. • Use representations to model and interpret physical, social, and mathematical phenomena.
Prior to the completion of grade 8, students will: • Create original animations or videos documenting school, community, or local events. (1, 2, 6) • Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. (3, 4, 6) • Select and use the appropriate tools and digital resources to accomplish a variety of tasks and to solve problems. (3, 4, 6) • Integrate a variety of file types to create and illustrate a document or presentation. (1, 6) • Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4, 6)	**ELA Standard 1:** Grade 8 **Speaking** • Present examples, definitions, analogies, and direct references to the text in support of ideas **ELA Standard 3:** Grade 8 **Speaking** • State a hypothesis and predict possible outcomes from more than one perspective **Math Standard 3:** Grades 6-8 Representation Strand • Create and use representations to organize, record, and communicate mathematical ideas • Select, apply, and translate among mathematical representations to solve problems • Use representations to model and interpret physical, social, and mathematical phenomena

	MST Standard 2: Information Systems Intermediate • Use a range of equipment and software to integrate several forms of information. • Use spreadsheets and data-base software, electronic data bases and on-line services. • Obtain accurate and relevant information from a range of sources. • Collect data from probes to measure events and phenomena use simple modeling programs to make predictions. **MST Standard 5: Technology** Intermediate • Assemble a complete computer system System. • Use a computer system to acquire information from the Internet. • Use computer hardware and software to create prototypical designs and models. • Use a computer system to monitor and control external events and/or systems. **MST Standard 7: Access and Analysis** Intermediate • Access information from printed media, electronic databases, and community resources. • Use the information to develop a definition of the problem and to research possible solutions. **CDOS Standard 3a** Intermediate • Select and use appropriate technology to complete a task. • Select and communicate information in an appropriate format (e.g., oral, written, graphic, pictorial, multimedia).
Prior to the completion of grade 12, students will: • Select digital tools or resources to use for a real-world task and justify the selection based on their efficiency and effectiveness. (3, 6)	**ELA Standard 3:** Grade 9 **Reading** • Analyze and evaluate nonfiction texts; determine the significance and reliability of information.

• Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4, 5, 6) • Configure and troubleshoot hardware, software, and network systems to optimize their use for learning and productivity. (4, 6)	**ELA Standard 1:** Grade 10 **Reading** • Analyze information from different sources, making connections and showing relationships to other texts, ideas, and subjects. **ELA Standard 3:** Grade 11 **Reading** • Select, reject, and reconcile ideas and information in light of biases. **ELA Standard 1:** Grade 12 **Reading** • Analyze and synthesize information from different sources by making connections and showing relationships to other texts, ideas, subjects, and the world at large. **Math Standard 3:** Grades 9-12 Representation Strand • Create and use representations to organize, record, and communicate mathematical ideas • Select, apply, and translate among mathematical representations to solve problems • Use representations to model and interpret physical, social, and mathematical phenomena **MST Standard 6: Interconnectedness Models** Commencement • Incorporate new design feature in a CAD drawing • Use a computer simulation to create a model of system under stress.

March 2008