



Technology Plan

July 2011 – June 2014

<http://www.rayder.net/tech/>

Charlevoix Public Schools

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It is the mission of the Charlevoix Public Schools, in partnership with the community, to prepare students to think, learn, and positively contribute to a diverse global community.

Table of Contents

Mission Statement	1
Introduction.....	2
Vision	3
Goals	4
Curriculum Integration	5
Student Achievement.....	7
Technology Delivery	14
Parental Communications & Community Relations.....	15
Collaboration.....	16
Professional Development	17
Supporting Resources	18
Infrastructure Needs/Technical Specification, and Design.....	19
Increase Access	24
Budget and Timetable	25
Coordination of Resources	27
Evaluation.....	28
Acceptable Use Policy.....	29

Attachments

District Acceptable Use PolicyAttachment A

Mission Statement

District Mission Statement

It is the mission of the Charlevoix Public Schools, in partnership with the community, to prepare students to think, learn, and positively contribute to a diverse global community.

Technology Mission Statement

To think, learn, and positively contribute to a diverse global community, students and teachers must be provided with technologies, support and learning opportunities that foster and enhance:

- Creativity and Innovation
- Communication and Collaboration
- Research and Information Fluency
- Critical Thinking, Problem Solving, and Decision Making
- Digital Citizenship
- Technology Operations and Concepts

Based on: National Educational Technology Standards for Students. International Society for Technology in Education. 2007. retrieved 23 May 2011. <<http://www.iste.org/standards/nets-for-students/nets-student-standards-2007.aspx>>

Introduction

Charlevoix Public Schools is a K-12 school district located in the northwest corner of Michigan’s Lower Peninsula between the shores of Lake Michigan and Lake Charlevoix. The district serves approximately 1062 full-time students in three buildings with a total of 65 teachers, including 2 counselors and 1 library media specialists. In addition, the district provides classes for 70 St. Mary’s students and operates an alternative education program on Beaver Island, serving 30 students.

The community approved a 7-year bond in May of 2008 to support the following technology, facilities and transportation needs:

- \$1.9 to \$2.1 million for technology upgrades
- \$2.25 to \$2.4 million for academic, building and facilities upgrades
- \$1.5 million for energy reduction and building retrofitting projects
- \$400,000 for the purchase of five buses

The District’s facilities include a state of the art high school which opened in the fall of 2002, a middle school and elementary school both recently renovated, a new central administration building completed in 2008 and a new bus garage completed in 2009. These new and renovated facilities will meet the needs of the community far into the future.

Superintendent’s Office:

Charlevoix Public Schools
 104 E. St. Mary’s Drive
 Charlevoix, MI 49720
 (231) 547-3200

School Buildings:

	<u>Socioeconomic Status *</u>
Charlevoix Elementary School (Grades K-4) 13513 Division Street Charlevoix, MI 49720 (231) 547-3215	44.32%
Charlevoix Middle School (Grades 5-8) 108 E. Garfield Street Charlevoix, MI 49720 (231) 547-3206	40.52%
Charlevoix High School (Grades 9-12) 05200 Marion Center Road Charlevoix, MI 49720 (231) 547-3222	29.81%

* % of students participating in the National School Lunch Program

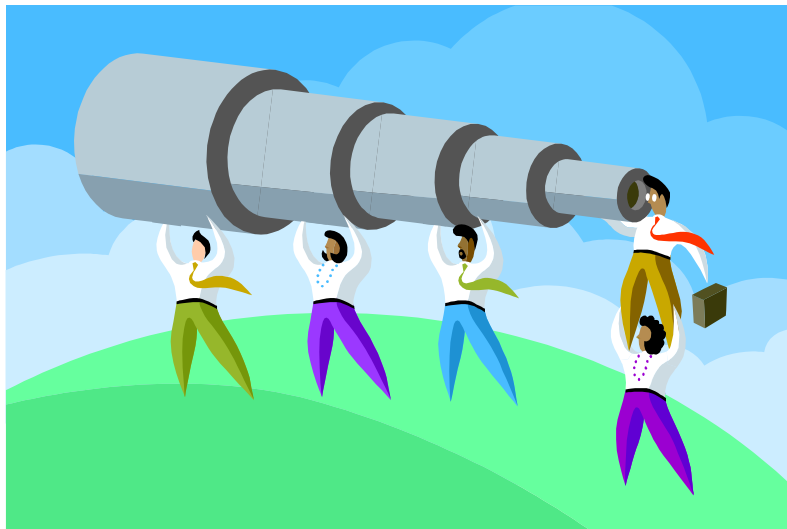
Vision

District Vision Statement

The Charlevoix Public Schools will provide a stimulating learning environment across the whole curriculum, which maximizes individual potential and ensures students of all ability levels are well equipped to meet the challenges of education, work and life.

Technology Vision Statement

“Technological Empowerment for All”



The purpose of this vision statement is to provide direction and purpose to the integration of technology within the Charlevoix Public School District.

This vision statement is based upon the beliefs that:

- all students in the Charlevoix Public Schools must obtain technological literacy.
- a basic technological competency is essential in today’s society.
- emerging technologies are powerful tools that provide new and innovative teaching strategies to support the educational process in Charlevoix Public Schools.

Technological literacy is defined as: “the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.”

Source: "Media Literacy - Definition Matrix." SETDA Toolkit 2007. State Educational Technology Directors Association. 2007. retrieved 23 May 2011.
<<http://www.setda.org/web/guest/toolkit2007/medialiteracy/definitionmatrix>>.

Goals

The goals and strategies outlined in this plan have the primary focus of improving teaching and learning and improving student academic achievement. The goals established in the District and School Improvement Plans are the key areas of focus for concentrated technology integration.

All learners and facilitators of learning will:

- master basic technology literacy skills.
- have adequate hands-on technology time to complete learning tasks, enhance academic achievement, and meaningfully develop technology literacy skills and technology integration methods.
- have access to up-to-date multimedia resources, telecommunications networks, and online resources to support meaningful, engaged learning and effective educational practices.
- have timely access to knowledgeable technical support staff.

Based on: "Develop a Vision and Policy: Why Develop a Technology Vision?." Technology Connections For School Improvement Planner's Handbook. North Central Regional Educational Laboratory. 1999.
<<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED437908>>.

Curriculum Integration

The District's Curriculum Development Cycle provides guidelines for developing and documenting curriculum. Technology integration, including alignment of the Michigan Educational Technology Standards for Students (METS-S) 2009 and the National Educational Technology Standards for Students (NETS-S) 2007 with local technology outcomes, is a key element of the Curriculum Development Cycle.

Working within the guidelines of the District Curriculum Development Cycle, the curriculum core teams shall:

- Recommend written curriculum that is aligned with the Michigan Curriculum Framework and other standards as documented in the Curriculum Development Cycle.
- Recommend assessments of grade level essential outcomes for individual student credentialing.
- Recommend delivery of the written curriculum.
- Recommend purchase of courseware (i.e. textbooks, equipment, computer software, technology, media center support materials, etc.) to deliver and access the written curriculum.
- Recommend the professional development necessary to deliver and access the written curriculum.

Through the ongoing Curriculum Development Cycle, curriculum shall be modified and developed as necessary to address ever-changing needs and improve academic achievement, including technology literacy.

Curriculum Goals

- All students shall achieve technology literacy prior to the completion of 8th grade
- Continue to identify and promote curricula and teaching strategies that integrate technology effectively into curricula and instruction.
- Use the Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) computerized adaptive assessment program to measure and effect improvements in student academic achievement.

Strategies for Curriculum Integration	Timeline
Continue curriculum development cycle with sustained focus on technology integration and alignment with the MET-S in all areas of curricula and instruction.	Ongoing per 5-year cycle
Promote the use of existing curriculum integration resources: <ul style="list-style-type: none"> • NETS-S Implementation Wiki http://nets-implementation.iste.wikispaces.net/ • Michigan Online Resources for Educators http://more.mel.org/index.php • Best Practices of Technology Integration in Michigan http://www.remc11.k12.mi.us/bstpract/ • Curriculum Integration 2005 http://techplan.edzone.net/ci2005/ • Curriculum Integration 2006 http://techplan.edzone.net/ci2006/ • Curriculum Integration 2007 http://www.techplan.org/ci2007/ 	Ongoing
Continue use of the NWEA MAP computerized adaptive assessment program, and provide training about understanding and interpreting data and the use of data tools to differentiate instruction and improve learning.	Annually – Fall, Winter & Spring

Student Achievement

The Impact of Technology on Student Achievement

The keys to raising student achievement are to provide students with a solid foundation of basic skills and to motivate them to learn. Technology can help accomplish this goal. It engages students and fires their imaginations. It helps teachers stimulate young minds in ways that make a profound and lasting difference. Numerous research studies on the impact of technology on student achievement have demonstrated this finding with remarkably similar results. A review of the literature resulting from these studies supports the following conclusions:

- Students, especially those with few advantages in life, learn basic skills — reading, writing, and arithmetic — better and faster if they have a chance to practice those skills using technology.
- Technology engages students, and as a result they spend more time on basic learning tasks than students who use a more traditional approach.
- Technology offers educators a way to individualize curriculum and customize it to the needs of individual students so all children can achieve their potential.
- Students who have the opportunity to use technology to acquire and organize information show a higher level of comprehension and a greater likelihood of using what they learn later in their lives.
- By giving students access to a broader range of resources and technologies, students can use a variety of communication media to express their ideas more clearly and powerfully.
- Technology can decrease absenteeism, lower dropout rates, and motivate more students to continue on to college.
- Students who regularly use technology take more pride in their work, have greater confidence in their abilities, and develop higher levels of self-esteem.

Source: "The Impact of Technology on Student Achievement: A Summary of Research Findings on Technology's Impact in the Classroom." [Apple - Education - Research](#). April 2002. Apple Computer, Inc..

Technology (including software and electronically delivered learning materials) shall be integrated into the District's curricula and instruction for the purpose of improving student academic achievement. Specific examples from within content areas are shown in the following tables:

**ELEMENTARY LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Language Arts	Mathematics	Social Studies
<p>Interactive stories and books. Use word processing in the writing process. Work with literature-based and reading programs. Use desktop publishing. Complete video projects. Write newsletters. (Student and teacher.) Utilize graphics in writing. Use dictionary, spell check, thesaurus and grammar programs. Design multimedia reports and publications. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Drill and practice math skills. Use simulation software in problem solving. Use instructional resources on video. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Utilize individual and cooperative learning involving computer-based resources. Employ geography map skills. Write reports Access online databases for research. Use instructional resources on video. Use multimedia software for student reports. Apply desktop publishing for student projects and reports. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>
Science	Arts	Music
<p>Review basic skills and concepts using computer-based resources. Access online databases for research. Use simulation software for problem solving. Download data from weather satellite. Use multimedia software for student reports. Use instructional resources on video Use a video microscope. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Utilize computer drawing programs. Produce multimedia projects. Use still and live video. Explore art history and gain an appreciation of art using online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use MIDI controls to compose music. Develop computer compositions. Print sheet music. Use microphones and audio CD players. Use a synthesizer and keyboards. Utilize interactive whiteboard as instructional and student learning tools.</p>

**ELEMENTARY LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Physical Education	Special Education	Media Centers
Access online databases for research. Use instructional resources on video.	Use Franklin spellers. Conduct electronic IEP's. Access the Internet. Use a digital camera. Remediate using ILS. Use word processing. Drill and practice for skill development. Use assistive peripherals and software for special needs. Employ instructional resources on video. Utilize interactive whiteboard as instructional and student learning tools.	Use OPAC and computerized circulation. Provide access to multiple computer stations Access online resources. Use instructional resources on video. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.
Integrated Learning System		
Remediate for MEAP. Support at-risk students. Provide enrichment. Provide across the curriculum educational support.		

**MIDDLE SCHOOL LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Language Arts	Mathematics	Social Studies
<p>Use word processing, spell check, thesaurus. Drill and practice for editing, punctuation, and capitalization. Review vocabulary. Use online databases for research. Use word processing to produce research report. Use blogs, wikis and other online writing resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use graphing calculators. Use online databases for research. Drill and practice math skills. Use spreadsheets. Teach geometry concepts. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use online databases for research. Teach geography lessons with electronic mapping. Apply word processing skills to write reports. Use multimedia software in the production of reports. Produce projects using desktop publishing. Use simulation software to teach problem solving. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>
Science	Integrated Learning Systems	Music/Arts
<p>Use multimedia to produce student projects. Use online databases for research. Use word processing to produce reports. Use interactive lab simulation software. Prepare for MEAP. Individualize instruction. Use simulations. Study science careers. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Remediate for the MEAP Support at-risk students. Provide enrichment. Provide educational support across the curriculum.</p>	<p>Work with synthesizers. Use audio compact discs and digital music. Investigate art history using online resources. Use graphic arts programs. Utilize computer drawing programs. Use technology in support of performing arts. Utilize interactive whiteboard as instructional and student learning tools.</p>

**MIDDLE SCHOOL LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Physical Education	Special Education	Technology Education
Research the history of sports. Use spreadsheets for fitness charts. Use software programs to produce awards and certificates. Use instructional resources on video. Individualize fitness programs. Use nutrition software.	Individualize instruction using ILS software. Provide remediation using ILS software for drill and practice. Use word processors. Utilize interactive whiteboard as instructional and student learning tools.	Create timelines of advancements in technology. Develop computer generated drawings. Use video resources. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.
Media Center		
Use computerized circulation and OPAC Provide access to multiple computer stations Use desktop publishing. Provide individual and cooperative learning opportunities with online resources. Instruct in electronic media in all subject areas. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.		

**HIGH SCHOOL LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Language Arts	Science	Business/Voc. Ed.
<p>Access a writing lab. Use software to teach the writing process. Use online resources for research. Utilize desktop publishing for writing reports, publishing documents, etc. Develop video portfolios. Build instructional resources library on video for literature enrichment. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Perform lab simulations. Utilize video microscopes. Use a digital camera, video recorder, and camcorder for student and staff projects. Use multimedia tools for presentation of science programs. Develop science projects using word processing and spreadsheets. Use electronic balances. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use word processing for applied communications and written presentations. Design spreadsheets for numerical analysis. Graph charts. Research online. Use a scanner for graphics and desktop publishing. Access telecommunications. Develop multimedia for reports and presentations. Use presentation software. Use desktop publishing programs. Explore careers. Utilize interactive whiteboard as instructional and student learning tools.</p>
Mathematics	Media Center	Special Education
<p>Use graphing calculators and programs to support problem solving and visual concept development. Use word processing for presentation of problem solutions. Use spreadsheets for numerical analysis and data processing. Create multimedia reports with graphics, text, and sound. Research online sources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use OPAC and computerized circulation. Provide access to computer lab and individual computer stations. Access online resources for research. Utilize video projector for instruction and evaluation of online resources. Provide access to camcorders, laser printers, digital cameras, and scanner. Use blogs, wikis and other online resources.</p>	<p>Use digital camera to provide documents for portfolios. Use camcorder for group projects. Use software for remediation and support of mastery learning. Use computer stations for term papers, MEAP preparation, research, record keeping, etc. Utilize interactive whiteboard as instructional and student learning tools.</p>

**HIGH SCHOOL LEVEL: CURRENT/PROJECTED
TECHNOLOGY INTEGRATION ACROSS THE CURRICULUM**

Below are examples of how technology can be appropriately integrated in specific curricular areas.

Social Studies	Journalism	Broadcasting
<p>Use online resources. Prepare multimedia reports with text, sound, and video. Use multimedia tools to support class activities. Use simulations. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use word processing. Use camera, digital camera, and a scanner. Use Adobe Creative Suite. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>	<p>Use camcorder for recording. Import from camcorder into Macs. Edit footage imported. Export for Rayder TV. Access online resources for developing newscasts. Utilize interactive whiteboard as instructional and student learning tools.</p>
Arts	Physical Education	Foreign Language
<p>Use computer drawing programs. Produce multimedia projects. Use still and live video in projects. Create animations. Use video resources for art history and appreciation. Utilize interactive slate as instructional and student learning tools.</p>	<p>Track sports statistics. Use an electronic timer for track. Use video to teach athletic skills. Use software to track training programs. Use simulations: diet and physical fitness.</p>	<p>Produce multimedia projects. Use still and live video in projects. Access online resources for research. Use blogs, wikis and other online resources. Utilize interactive whiteboard as instructional and student learning tools.</p>
Music	Industrial Technology	
<p>Use projector and computer to teach composition. Use MIDI interface for music composition and performance. Use audio compact disc and digital music. Create music expression using multimedia resources. Use online resources for research in music appreciation and history.</p>	<p>Learn principles of technology. Use CAD program. Program robotic devices. Explore careers. Produce videos. Use multimedia. Use desktop publishing. Use presentation software. Utilize interactive whiteboard as instructional and student learning tools.</p>	

Technology Delivery

The District utilizes a variety of methods for technology delivery including the Internet, *Discovery Education streaming*TM video, and online courses. Online courses allow the District to expand curriculum offerings, save money and resources over traditionally staffed courses, improve technology skills of students and staff, and show the community our commitment to providing up-to-date learning opportunities. Online courses also provide for greater flexibility and more solutions to accommodate the individual scheduling and learning needs of students.

*Discovery Education streaming*TM provides the District with:

- scientifically proven, standards-based digital resources for teachers, students, and parents that make a positive impact on student learning
- high quality digital resources in easy-to-use formats in all core curricular subject areas
- state-of-the-art professional development sessions for online and onsite support

Strategies for Delivery of Specialized/Rigorous Courses	Timeline
Evaluate course offerings and course requests to identify specialized or rigorous courses and curricula that may be delivered through the use of technology, including distance learning technologies.	Annually
Evaluate online course offerings available to the district and include in course offerings made available to students as appropriate.	Annually

Parental Communications & Community Relations

Ensuring effective communication and promoting involvement throughout the Board, District and community is a key goal adopted by the Charlevoix Board of Education. The district shall use various forms of communications to inform students, parents, community, staff and media of the various technologies available in the district, and the role of technology in the curriculum.

Parents and other community members are involved in various aspects of planning throughout the District:

- Strategic Planning Committee
- District Steering Committee
- Building-level Curriculum Design Teams
- Specialized Task Forces
- PTO
- Boosters

Technology planning is a collaborative effort of many people. During the 2007-2008 school year, the district established a Strategic Planning Committee to develop a long-term plan for the future of Charlevoix Public Schools. The committee consisted of representatives from the ENTIRE school community including parents, teachers, students, administrators, support staff and community members. Technology is one of five key goal areas included in the recommendations from the committee and addressed within this plan. The District shall encourage the ongoing involvement of parents and other community members in technology planning, implementation and assessment. The Strategic Planning Committee reconvened during the 2010-2011 school year and is preparing to submit their recommendations to the Board of Education.

Strategies for Communications	Timeline
Post District Technology Plan on the District website with annual updates.	Ongoing, three year cycle
Maintain District and building level web pages to provide general information, calendar of events, news, curriculum information, and highlights of student accomplishments.	Ongoing
Provide online parent and student access to grades, attendance, progress reports, and electronic communications with teachers.	Ongoing
The Acceptable Use Policy shall be used to communicate technology use guidelines to students, parents and staff.	Ongoing for new students and staff

Collaboration

District technologies have been utilized by Charlevoix-Emmet Intermediate School District (Char-Em ISD), colleges, universities, and industry for various education programs. Adult literacy service providers shall be encouraged to utilize the District's technologies. Collaborative programs shall be designed to:

- Maximize the use of technologies available in the district
- Provide community access to and benefit from the acquisition of district technology
- Offer additional technology training opportunities to staff
- Foster a positive relationship between the school, other educational institutions, and community
- Embody the concepts of life long learning



Professional Development

The district shall provide ongoing, sustained professional development for teachers, support staff, administrators, and school library media personnel to further the effective use of technology to improve teaching and learning. Professional development offerings shall set the groundwork for integration rather than focus on narrow skill development.

In 2010, the District offered an intensive train-the-trainer workshop that resulted in seven district staff becoming certified trainers for Smart Notebook Software 10. These trainers provide on-going technology integration training, formally and informally, to all staff.

Guidelines for Implementing a Technology Staff Development Program

1. Technology should be provided to every classroom.
2. Training should be mandatory not voluntary.
3. Teachers should be the primary trainers of teachers.
4. Training should be hands-on.
5. Training should be done in small groups.
6. Training should be in content specific areas.
7. Training should focus on curriculum issues.
8. Training should be a regular part of the school day rather than an addition.
9. Training should be on going.
 - a. Training should not be a one-shot episode.
 - b. Adequate time should be spent in each session to allow for collaboration.
 - c. Training should include time for interdisciplinary teamwork.
10. Training should be provided for all members of the school staff:
 - a. School board members
 - b. Administrative staff
 - c. Instructional staff
 - d. Paraprofessionals
 - e. Support staff

Source: Siegel, Jessica. "The State of Teacher Training." Electronic Learning May/June 1995: 43-53.

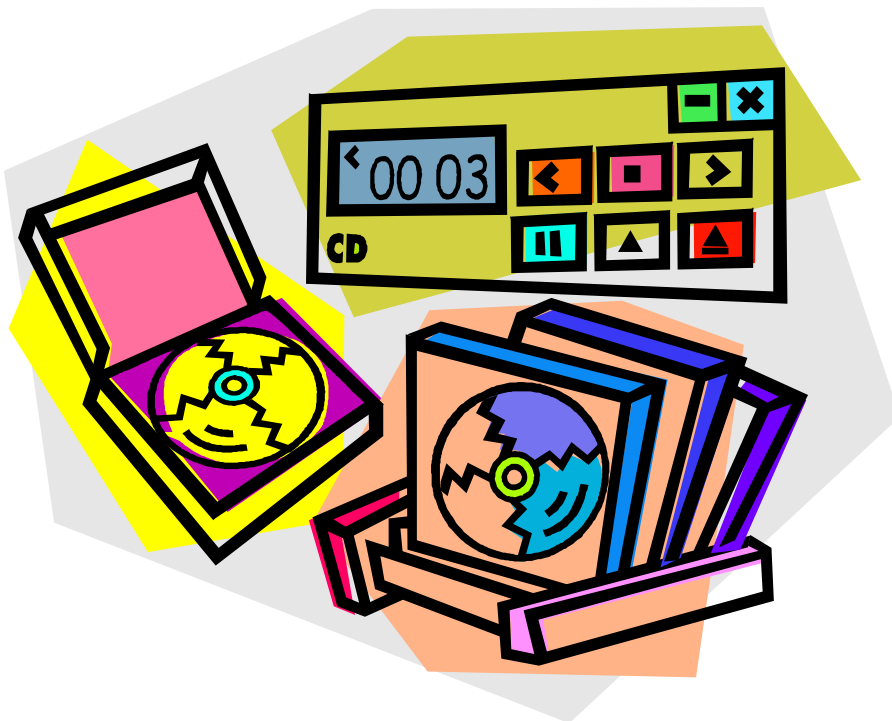
Strategies for Professional Development	Timeline
Incorporate the National Educational Technology Standards (NETS) for Teachers 2008 and the NETS for Administrators 2009 into professional development offerings.	Ongoing
Solicit feedback after professional development sessions to identify what works, what doesn't work, and future training needs.	Ongoing
Continue to encourage staff participation in the technology professional development opportunities provided by Char-Em ISD and other professional organizations.	Ongoing

Supporting Resources

Supporting resources such as services, software, other electronically delivered learning materials and print resources are required to ensure successful and effective uses of technology. Evaluating and identifying required supporting resources is part of the District Curriculum Development Cycle.

The following supporting resources are currently utilized to support the District's entire technology program:

- Acceptable Use Policy
- Various software programs, manuals and online documentation
- Charlevoix-Emmet ISD Media Center video lending library
- Charlevoix Public Library online research databases
- District website
- Online subscription services
 - Elementary Zone
 - Enchanted Learning
 - *Discovery Education streaming™*
 - Study Island
- Michigan eLibrary (MeL) and MeL databases
- REMC purchasing program



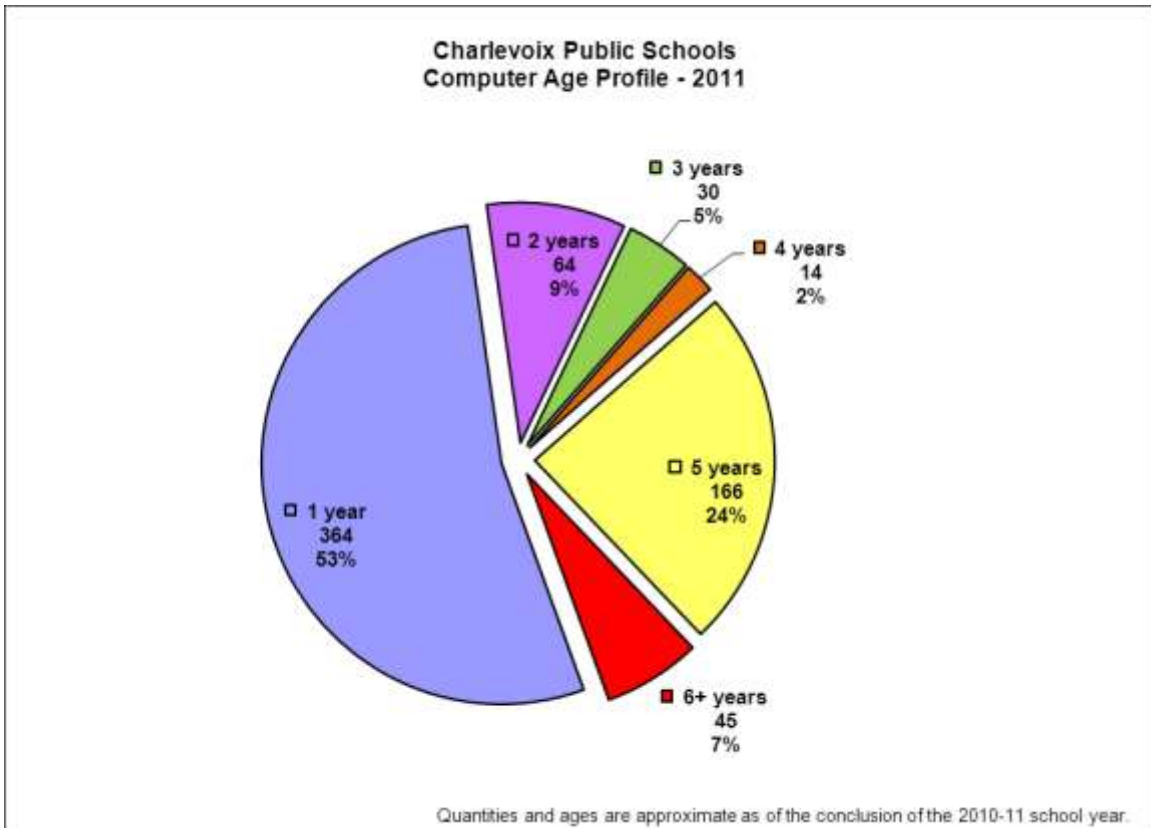
Infrastructure Needs/Technical Specification, and Design

To achieve the goals outlined in this plan, including access to up-to-date multimedia resources, telecommunications networks, and online resources, the district must regularly acquire new technologies. In addition, previously acquired technologies must be regularly evaluated for educational appropriateness and updated or replaced as necessary.

The district shall evaluate the age of computer hardware and software annually. The goal is to replace computers after no more than 5 years, and to update or replace software after no more than 3 years. New equipment will be placed in areas requiring current hardware, and older technologies will be moved to other less demanding applications in the district as appropriate.

Current Status

The District currently has approximately 700 computers in operation. All teachers have a laptop and docking station, while administrators and office staff have a dedicated desktop computer. The ratio of students to dedicated student computers is approximately 2-to-1.



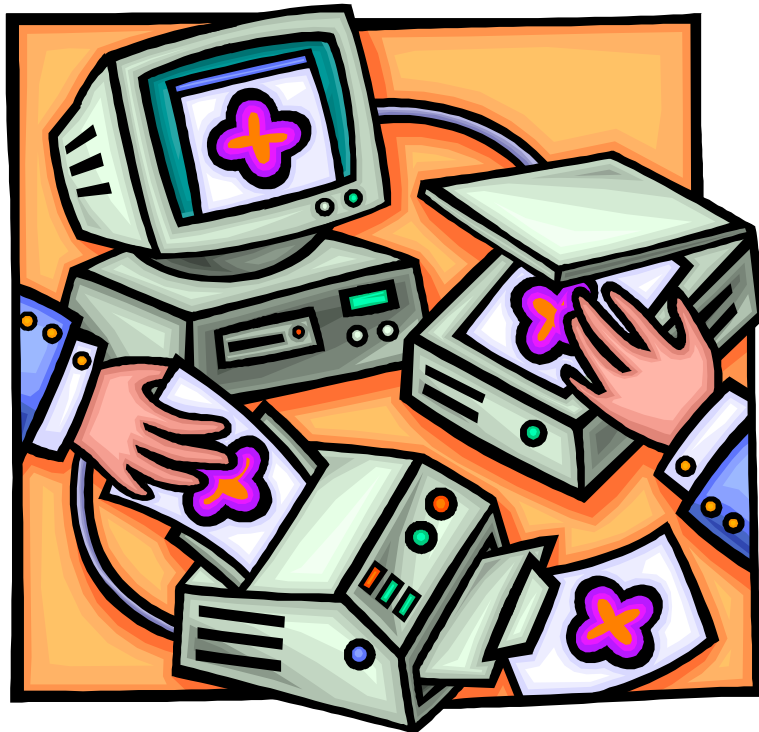
Microsoft Windows is used as the desktop operating system on most personal computers with the exception of the high school publications lab which uses Mac OS X 10.x. Microsoft Office or Open Office is installed on all staff and student computers. A variety of other software applications are used throughout the District.

The District's classrooms were equipped with Smart interactive whiteboards, NEC WXGA mounted projectors, Lightspeed classroom audio systems, DVD/VCRs with tuners and Epson document cameras during a 2-phase project started in the summer of 2009.

All of the District's classrooms and offices are wired with Category 5 or 6 unshielded twisted pair (UTP) cable. Cisco Catalyst 3750/3560/2960 network switches were installed in all three schools and administrative facilities in 2009. Cisco Aironet 1142AG wireless access points were also installed in all academic and office areas throughout the district at the same time. The wireless network provides high-speed 802.11n wireless access to staff and student wireless devices throughout the District.

During the 2008-2009 school year, the District constructed a fiber wide area network (WAN) to connect all district facilities. A 72-strand fiber backbone was built in partnership with the City of Charlevoix. The fiber and Cisco network infrastructure provide a 10Gbps network connection between all three schools. In 2009, the district centralized server resources into the middle school and virtualized most servers onto VMware vSphere 4.

Cisco's Unified Communications Callmanager was installed in 2009 to replace the District's disparate phone systems. The Cisco system provides IP-based telephone services to all classrooms and office areas throughout the District. Local telephone services are provided using a PRI from the telephone company. Long distance services are also available throughout the District.



Technology Acquisition Goals

Since the inception of the original technology plan in 1995, the District has made significant progress in the acquisition and implementation of educational technologies. Acquisitions and upgrades shall continue to ensure the ongoing success of technology integration throughout the curriculum with the overall goal of improving teaching and learning.

- Hardware, software, telecommunications services and other technology resources shall be provided to support the network infrastructure required to meet the educational needs of the district.
- Each classroom in the district shall be provided with:
 - Access to the district network, the Internet, email, and other electronic resources
 - Telephones and appropriate telecommunications services
 - Cable/satellite television and access to other district video resources
 - One teacher computer with productivity, curriculum, and student management software
 - One printer and/or network access to other printing resources
 - Data projectors, interactive whiteboard technology, document cameras, audio systems, DVD players and other audio/visual technologies as required
 - Access to classroom response (hand-held clicker) systems
- Media centers shall be equipped with computer hardware, software, telecommunications services, Internet resources, audio/visual and multimedia resources required to support the educational mission of the media center.
- Office areas shall be provided with the appropriate hardware, software, and other technology resources necessary to perform the educational support functions of the office.
- Student and teacher access to computers (desktops, laptops, and handhelds) shall be provided through classrooms, computer labs, laptop carts and media centers or 1-to-1 computing. Sufficient quantities of computers shall be available to provide for the educational needs of all students.

Strategies for Acquiring Technologies	Timeline
Wide Area Network (WAN) – Implement fiber WAN solution that meets growing district bandwidth needs and provides for future growth.	Completed 2009. Ongoing maintenance.
Wireless Local Area Network (WLAN) – Perform site engineering, purchase and install wireless access points to support growing use of wireless computers and other devices.	Completed 2009. Ongoing maintenance. Upgrade as demand requires.
Telephone – Implement district-wide telephone system with telephones for every classroom/office and voicemail for all staff.	Completed 2009. Ongoing maintenance.
Internet – Monitor and evaluate Internet usage to determine the need for increased bandwidth to support district demand. Increase as required.	Ongoing
Web/Email – Evaluate current web and email services and upgrade as required to meet communication/collaboration needs of the district.	Ongoing
Software – <ul style="list-style-type: none"> • Maintain licensing for network operating system. • Continue software maintenance agreements and upgrades for all standardized software used throughout the district. 	Annually
Online Services – Review and renew as required to support the curriculum.	Annually
Replacement of Computers and Servers – Review age and capabilities to perform required tasks, and replace as required.	Annually
Wireless Laptop Computers/Handheld Devices – Implement additional wireless laptop and/or handheld device programs	2010-11: Implemented five mini laptops per elementary classroom and four 15-station carts in both middle and high schools. Evaluate annually. Ongoing maintenance.
Telecommunications Services – Review all telecommunications services and upgrade/replace as necessary to meet changing needs and to obtain the best value for the District.	Annually
Design, develop and implement “Smart classrooms” (data projectors, interactive whiteboards, document cameras, sound enhancement) district-wide.	Completed 2009-2010. Ongoing maintenance.

Interoperability

To maintain interoperability among components of technologies to be acquired and existing technologies and to reduce the total cost of ownership, the district has standardized in several areas:

- Microsoft Windows operating system
- Novell and Microsoft network operating systems
- Microsoft Windows based PCs
- Microsoft Office and Open Office suites of productivity applications
- Google Apps for Education

Future acquisitions of hardware and software will be planned as consolidated annual purchases. Standardized specifications will be developed each year to maintain optimal interoperability and lower support costs. The use of free open source software, platform-agnostic resources and cloud-based computing technologies will be evaluated when developing standards. By consolidating purchases, the district will realize better purchasing power and further reduce the total cost of ownership. Hardware and software needs for each year will be identified annually and purchased for summer implementation. When possible, installation of new or replacement technologies will take place when school is not in session to keep disruptions to a minimum.

Technical Support

Technical support is critical for the successful implementation and integration of technology. The district employs a full-time technology coordinator responsible for all technology related issues, including technical support. As schedules allow, one teacher is designated as building technology coordinator in each building and has regularly scheduled release time to provide front-line technical support. In addition, one or two students are normally selected and trained each year to provide additional technical assistance in the high school under the guidance of the technology coordinator.

The district uses email-based support requests to identify and track technical support issues. Requests are prioritized and managed by the district technology coordinator.

Strategies for Technical Support	Timeline
Continue use of emailed support requests to enhance workflow and improve technical support.	Ongoing
Provide hands-on technical training to building technology coordinators and student assistants.	Ongoing as available
Implement closely managed network environment and continue with standardization of technologies to reduce support requirements.	Ongoing

Increase Access

For many students, particularly those from low income households and other at-risk groups, school offers the only opportunity for technology access. Increasing numbers of states and districts are seeing value in providing a computing device to each student. The District supports the concepts of 1-to-1 computing and the goals of Michigan’s Freedom to Learn (FTL) Program which include:

- Engage students in learning (resulting in decreased dropout rates, tardiness, absenteeism, discipline referrals)
- Enhance student learning and achievement in core academic subjects with an emphasis on developing the knowledge and skills requisite to the establishment of a 21st century workforce
- Provide greater access to equal educational opportunities through ubiquitous access to technology
- Foster effective use of wireless technology through systematic professional development for teachers, administrators, and staff
- Empower parents and caregivers with the tools to become more involved in their child's education
- Support innovative structural changes and sharing of best practices
- Create educational environments that use technology as part of an instructional delivery system

Strategies for Increased Access	Timeline
Investigate and promote 1-to-1 computing initiatives and associated funding opportunities.	Ongoing
Continue email services for all staff and all students in grades 4 through 12.	Ongoing via Google Apps for Education
Provide online parent and student access to grades, attendance, progress reports, and electronic communications with teachers.	Ongoing via PowerSchool
Continue use of accessibility software and other assistive technologies.	Ongoing

Budget and Timetable

With the constant changes in technologies, and their associated costs, it is imperative for long-range plans to incorporate budgets and timelines that take into account the total costs of ownership (TCO) of technology. The district has established a long-range budget plan for technology that addresses acquisition costs, support, software, replacement costs and connectivity.

Professional development budgets are recommended in an amount equal to 15-30% of new technology purchases. All professional development activities, whether technology specific or not, should include some aspect of technology training.

One element of TCO, retrofitting of buildings to accommodate new technologies, is not reflected in this budget. With the new high school opened in 2002 and recent renovations to the middle and elementary schools, including asbestos removals, electrical upgrades, network wiring, and the addition of cooling systems, most technology-related building infrastructure needs are met for the duration of this plan. The 7-year bond passed in May of 2008 will continue to support our technology and facility needs beyond the life of this plan.

When budgeting and prioritizing technology needs, all of the following shall be considered:

- Number of students impacted
- Number of staff impacted
- Costs versus benefit
- Need driven by the curriculum
- Overall goal of increased student achievement
- Total Costs of Ownership

The following budget shall be evaluated and revised annually to reflect changing needs, technologies and costs:

	2011-2012	2012-2013	2013-2014	Funding Notes
Tech Equipment - Bond	\$264,225	\$303,500	\$303,500	Bond
Tech Equipment - CTE	\$10,000	\$10,000	\$10,000	CTE Millage Tech & Maint
Tech Equipment - Added Costs		\$48,000		Added Costs
Tech Supplies - CTE	\$20,000	\$20,000	\$20,000	CTE Millage Tech & Maint
Tech Supplies	\$6,000	\$6,000	\$6,000	
Tech Support	\$135,300	\$135,300	\$135,300	
Contracted Services - CTE	\$5,000	\$5,000	\$5,000	CTE Millage Tech & Maint
Connectivity	\$23,000	\$23,000	\$23,000	CTE Millage Connectivity
Telecommunications	\$18,840	\$18,840	\$18,840	less E-rate discounts
TOTAL	\$482,365	\$569,640	\$521,640	

Coordination of Resources

The goals of this technology plan can not be accomplished without funds from a variety of sources. The district will coordinate available state and local resources to implement the activities and acquisitions prescribed in this plan. Funding from the general fund, Vocational-Technology millage, E-Rate discounts, bond proceeds, grants and donations are all critical to the success of this plan.

Strategies for Coordination of Resources	Timeline
Sell balance of 2008 bond	2012
Promote renewal of millages and new bonds.	Ongoing
Continue participation in the E-Rate program.	Ongoing
Review other grant opportunities and apply as appropriate.	Ongoing



Evaluation

Due to the constantly changing nature of technology, this plan must be evaluated and revised regularly to determine the extent to which activities are effective in integrating technology into the curricula and instruction, increasing the ability of teachers to teach, and enabling students to reach challenging State academic standards.

Strategies for Evaluation of Progress	Timeline
The Technology Committee shall meet regularly to evaluate progress on goals and accompanying strategies.	Meet bi-monthly as required during school year
The Technology Committee shall meet annually to determine: <ul style="list-style-type: none"> • Which of the outcomes established in the technology plan have been met. • Which of the outcomes outlined in the technology plan were not met. • The effect of the technology plan on the implementation of technology in the district. • The best courses of action to meet those outcomes outlined in the technology plan that have not yet been realized. • Necessary changes and/or adjustments to the technology plan to meet the changing needs of the district. 	Annually each Spring
The District shall analyze data collected from multiple data points (MEAP, NWEA, local assessments, etc.) and measure success by evaluating growth in student academic achievement over time.	Ongoing

Acceptable Use Policy

The district Acceptable Use Policy (AUP) was rewritten during the 2001-2002 school year to incorporate compliance with the Children’s Internet Protection Act (CIPA) and to provide better guidelines regarding the use of district technologies. The policy was adopted by the Board of Education on June 10, 2002. The AUP is included as attachment A to this plan.

Strategies for Implementing the Acceptable Use Policy	Timeline
Distribute new policy via orientation sessions with staff and students. Orientation sessions should review the key points of the policy, including responsibilities of users, and explain the process for signing and returning the policy.	Ongoing
Review policy guidelines, filtering technologies, monitoring and disciplinary actions.	As required
Refine/develop and implement K-12 curriculum addressing Acceptable Use.	Ongoing



Attachment A

Charlevoix Public School District Acceptable Use Policy

Charlevoix Public School District

Acceptable Use Policy

Preamble

The Charlevoix Public School District is pleased to provide access to technology resources including access to the Internet. These technologies allow interaction internally within the district and externally to systems located all over the world providing access to electronic resources which promote and enhance learning consistent with district educational objectives. Use of district technology resources by students and employees is a privilege and not a right. Users are obligated to respect and protect the rights of every other user and act in a responsible, ethical and legal manner.

Internet Safety Measures

With access to the Internet comes the availability of material that may not be considered to be of educational value. To the extent practical, the District shall use Internet filtering technologies to block or filter access to inappropriate materials, including visual depictions deemed obscene, child pornography, or any material deemed harmful to minors. Filtering technologies may be disabled or minimized by the system administrator for adults engaged in bona fide research or other lawful purposes.

The District recognizes that filtering technologies are imperfect, and that on an ever-changing global network it is impossible to filter all inappropriate materials. The District firmly believes that the valuable information and interaction available on this worldwide network far outweighs the possibility that users may obtain material that is not consistent with the educational goals of the District. In addition to the use of filtering technologies, online activities shall be monitored directly or indirectly to further safeguard students from accessing inappropriate materials.

When engaging in activities on the Internet, e-mail, and other forms of direct electronic communications, the following guidelines should be strictly adhered to:

- Students should not reveal their identity in any way, unless explicitly authorized by their teacher. This includes name, personal address, phone number, location, city, school name, team name, photographs or any other personal identification information.
- Users should not reveal personal information about others. This includes names, personal addresses, phone numbers, location, city, school name, team name, photographs or any other information that might identify others in any way.
- Students should never get together with anyone they meet online without permission of their parent or guardian.
- Users are responsible for all materials accessed under their assigned user accounts, and accept responsibility for keeping all inappropriate materials from entering the school via the Internet.
- Students should immediately tell their teacher, building principal or the system administrator if they receive or access anything that is inappropriate, threatening or uncomfortable.

Acceptable Use/Net Etiquette

Access to the District's technology resources, including the Internet, shall be made available to students and employees primarily for facilitating learning, enhancing educational information exchange, and administrative purposes. The following statements guide acceptable use of district technology resources:

- District technology resources shall not be used to engage in any illegal activities.
- Limited personal use of the system shall be permitted if the use:
 - Imposes no tangible cost on the District
 - Does not unduly burden the District's computer or network resources
 - Has no adverse effect on an employee's job performance or on student's academic performance.
- Users are expected to abide by the generally accepted rules of network etiquette. These include (but are not limited to) the following:

Charlevoix Public School District

Acceptable Use Policy

- Use appropriate language. Do not swear, use vulgarities or any other inappropriate language.
- Do not use the network in such a way that you would disrupt the use of the network by other users.
- Be mindful of network security and immediately report any viruses, errors, or security problems
- Examples of unacceptable uses include (but are not limited to) the following:
 - Sharing your password with anyone for any reason or using someone else's password.
 - Transmitting or downloading any material in violation of any U.S. or state regulations. This includes, but is not limited to, material that is copyrighted, threatening and harmful, sexist, racist, discriminatory, sexually explicit, obscene or protected by trade secrets.
 - Plagiarizing, or taking the ideas or writings of another and using them as one's own. This includes the copying and pasting of another's information without documenting the source.
 - Accessing non-educational chat rooms, instant messaging, news groups or games.
 - Engaging in any unauthorized commercial activity, product advertisement or political lobbying.
 - Using school technology resources for-profit business.
 - Using technology to distort the truth, to lie, or to misrepresent someone else.
 - Using any technology intentionally to harm or harass anyone.
 - Committing acts of vandalism. Vandalism is defined as any attempt to harm, destroy, or disrupt the operation of the network, hardware, software, or the data of any other user on the system or any other system. This includes, but is not limited to hacking and knowingly transmitting computer viruses.
 - Installing or copying any software to or from district equipment unless permission is explicitly granted by the system administrator.
- Users are expected to abide by the following guidelines for general care and use:
 - Use equipment with care and keep computer areas clean and orderly.
 - Do not bring food or drinks into computer areas.
 - Do not relocate, remove, or modify hardware or software without permission from the system administrator.
 - Adhere to the printer use guidelines established for each printer.
 - Maintain file storage user space, including the removal of unnecessary files.

Waiver of Warranty/Disclaimer

The District makes no warranties of any kind, whether expressed or implied, for the service it is providing. This includes loss of data resulting from delays, non-deliveries, missed deliveries or service interruptions caused by unforeseen network problems or a user's errors or omission. Use of any information obtained via the Internet is at the user's own risk. The District specifically denies any responsibility for the accuracy or quality of information obtained through its services. The District does not guarantee that materials stored on the system will be private. System administrators may review the information stored on the system to determine whether it is being used properly.

Charlevoix Public School District Acceptable Use Policy

Consequences for Violation of Policy

If a district user violates any provisions of this policy, his or her access could be limited, denied or terminated. The individual building administrator or superintendent may determine if the guidelines for the proper use of district technology have been violated and reserve the right to direct the cancellation of an individual's access if necessary. The system administrator may temporarily suspend a user's access without prior notice, if such access threatens the integrity of the District's network.

Use of district technology resources relating to or in support of illegal activities will be reported to the appropriate law enforcement authorities.

Staff disciplinary actions shall be handled in accordance with the applicable contract language.

Student disciplinary actions shall be handled in accordance with the Student Code of Conduct.

Declaration of Understanding and Adherence

I have read and understand the Charlevoix Public School District **Acceptable Use Policy** and agree to adhere to the principles and policies detailed within. In consideration for the privilege of using the Charlevoix Public School District's network and Internet connection, I hereby release Charlevoix Public Schools and its operators and sponsors from any and all claims arising from this use or inability to use these resources.

Year of Expected Graduation (students only): _____

Printed Name: _____

Signature of User: _____

Date: _____

The following is required for all minors:

Printed Name of Parent/Guardian: _____

Signature of Parent/Guardian: _____