

TECHNOLOGY PLAN

July 2008 to July 2011



Superior Central School District

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Superior Central School District

Technology Plan 2008-2011

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Superior Central School District

Technology Plan 2008-2011

I School Overview

Identification and logistical information

District Information

Technology Plan Dates	July 2008 to July 2011
District	Superior Central School District
District Address	P.O. Box 148, E2865 M94 Eben Junction, MI 49825
District Phone	906.439.5531
District Fax	906.439.5734
School Code	02080
RESA	Marquette-Alger
Technology Plan Web Site	www.superiorcentralschools.org/documents/technology_plan.pdf

Plan Contact

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II Introductory Material

Background information and plan context

Mission

Superior Central School is committed to excellence in teaching and learning for all students. We believe that all students can achieve mastery of basic skills and that our school's purpose and our responsibility is to educate all students while fostering positive growth in social and emotional behaviors and attitudes. We will provide effective instructional leadership, responsible fiscal management, and quality learning environments. We share

Description	Value
District size (square miles)	229.6
District population (2000 census)	2,191
District taxable Value	\$58,092,405
School building size (square feet)	80,000
Student population (K-12)	397
Professional staff	25
Support staff	19
Central administration	4
Student-teacher ratio	16 to 1
Poverty rate (free lunch %)	37

III Vision and Goals

Overall direction for the technology program

Vision

Because Superior Central School is committed to excellence in teaching and learning for all students, we believe that all students can achieve mastery of basic skills, which include technological applications and integration of these tools into their daily lives. While educating the whole child is our ultimate goal, we will provide quality instructional leadership, responsible fiscal management, and an environment that is conducive to exemplary learning. It is our vision to highly integrate technologies into this environment in order to empower our students to live and work in a rapidly changing world.

Goals

Superior Central School District goals and objectives are as follows:

Goal	Objectives
All Superior Central School District students will experience a quality, technology-infused education to maximize learning.	<ul style="list-style-type: none"> o Acquire essential knowledge and skills using technology as a learning tool. o Develop information fluency while learning how to acquire, evaluate, organize, utilize, and communicate information. o Develop community relationships to provide "real-world" experiences and authentic audiences for learning activities.
All Superior Central School District personnel	o Develop technology competencies for all staff

Goal	Objectives
<p>Superior Central School District will provide the appropriate resources (hardware, software, networking, technical and professional support, and facility renovations) necessary to effectively integrate technology into the learning environment.</p>	<ul style="list-style-type: none"> ○ Provide all students and teachers with equitable and appropriate access to technology resources necessary to make technology an indispensable and integral part of the entire learning process. ○ Develop and fund a plan to provide the human resources necessary to keep the technology performing at optimal levels. ○ Develop and fund a plan to provide the physical infrastructure necessary to operate and connect people to the resources they require.

IV Curriculum Integration

Goals and strategies, aligned with state and national standards, for using telecommunications and technology to improve teaching and learning

Elementary (K-5)

Basic Operations and Concepts

By the end of grade 5 each student will:

- 1) Discuss ways technology has changed life at school and at home.
- 2) Discuss ways technology has changed business and government over the years.
- 3) Recognize and discuss the need for security applications (such as virus detection, spam defense, popup blockers, and firewalls) to help protect information and to keep the system functioning properly.
- 4) Know how to use basic input and output devices and other peripherals (such as scanners, digital cameras, and video projectors).
- 5) Know proper keyboarding positions and touch-typing techniques.
- 6) Manage and maintain files on a hard drive or the network.
- 7) Demonstrate proper care in the use of hardware, software, peripherals, and storage media.
- 8) Know how to exchange files with other students using technology (such as e-mail attachments, network file sharing, diskettes, and flash drives).
- 9) Identify which types of software can be used most effectively for different types of data, for different information needs, or for conveying results to different audiences.

Social, Ethical, and Human Issues

By the end of grade 5 each student will:

- 1) Identify cultural and societal issues relating to technology.
- 2) Discuss how information and communication technology supports collaboration, productivity, and lifelong learning.
- 3) Discuss how various assistive technologies can benefit individuals with disabilities.
- 4) Discuss the accuracy, relevance, appropriateness, and bias of electronic information sources.
- 5) Discuss scenarios describing acceptable and unacceptable uses of technology (such as computers, digital cameras, cell-phones, PDAs, and wireless connectivity) and describe consequences of inappropriate use.
- 6) Discuss basic issues regarding appropriate and inappropriate uses of technology (such as copyright, privacy, file sharing, spam, viruses, and plagiarism) and related laws.
- 7) Use age-appropriate citing of sources for electronic reports.
- 8) Identify appropriate kinds of information that should be shared in public chat rooms.
- 9) Identify safety precautions that should be taken while on-line.
- 10) Explore various technology resources that could assist in pursuing personal goals.
- 11) Identify technology resources and describe how those resources improve the ability to communicate, increase productivity, or help achieve personal goals.

Technology Productivity Tools

By the end of grade 5 each student will:

- 1) Know how to use menu options in applications to print, format, and add multimedia features; open, save, and manage files; and use various grammar tools (such as a software or online dictionary, thesaurus, and spell-checker).
- 2) Know how to insert various objects (such as photos, graphics, sound, and video) into word processing documents, presentations, or web documents.
- 3) Use a variety of technology tools and applications to promote creativity.
- 4) Understand that existing (and future) technologies are the result of human creativity.
- 5) Collaborate with classmates using a variety of technology tools to plan, organize, and create a group project.

Technology Communications Tools

By the end of grade 5 each student will:

- 3) Identify how different forms of media and formats may be used to share similar information, depending on the intended audience (such as presentations for classmates and newsletters for parents).

Technology Research Tools

By the end of grade 5 each student will:

- 1) Use Web search engines and built-in search functions of other various resources to locate information.
- 2) Describe basic guidelines for determining the validity of information accessed from various sources (such as web sites, dictionaries, on-line newspapers, and CD-ROM).
- 3) Know how to independently use existing databases (such as library catalogs, electronic dictionaries, and encyclopedias) to locate, sort, and interpret information on an assigned topic.
- 4) Perform simple queries on existing databases and report results on an assigned topic.
- 5) Identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource.
- 6) Compare and contrast the functions and capabilities of the word processor, database, and spreadsheet for gathering data, processing data, performing calculations, and reporting results.

Technology Problem-Solving and Decision-Making Tools

By the end of grade 5 each student will:

- 1) Use technology resources to access information that can assist in making informed decisions about everyday matters (such as which movie to see and which product to purchase).
- 2) Use information and communication technology tools (such as calculators, probes, videos, DVDs, and educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community).

Middle School (6-8)

Basic Operations and Concepts

By the end of grade 8 each student will:

- 1) Use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer.
- 2) Use appropriate technology terminology.
- 3) Use a variety of technology tools (such as a dictionary, thesaurus, grammar-checker,

- 6) Identify changes in hardware and software systems over time and discuss how these changes affected various groups (such as individual users, education, government, and businesses).
- 7) Discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving.
- 8) Identify characteristics that suggest that the computer system hardware or software might need to be upgraded.
- 9) Identify a variety of information storage devices (such as diskettes, CDs, DVDs, flash drives, and tapes) and provide a rationale for using a certain device for a specific purpose.
- 10) Identify technology resources that assist with various consumer-related activities (such as budgets, purchases, banking transactions, and product descriptions).
- 11) Identify appropriate file formats for a variety of applications.
- 12) Use basic utility programs or built-in application functions to convert file formats.
- 13) Proofread and edit writing using appropriate resources (such as software or online dictionaries, spell check, grammar check, grammar references, and writing references) and grade level appropriate checklists both as individuals and in groups.

Social, Ethical, and Human Issues

By the end of grade 8 each student will:

- 1) Understand the potential risks and dangers associated with on-line communications.
- 2) Identify security issues related to e-commerce.
- 3) Discuss issues related to acceptable and responsible use of technology (such as privacy, security, copyright, plagiarism, spam, viruses, and file sharing).
- 4) Describe possible consequences and costs related to unethical use of information and communication technologies.
- 5) Discuss the societal impact of technology in the future.
- 6) Provide accurate citations when referencing information from outside sources in electronic reports.
- 7) Use technology to identify and explore various occupations or careers.
- 8) Discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning.
- 9) Identify uses of technology to support communication with peers, family, or school personnel.

Technology Productivity Tools

By the end of grade 8 each student will:

- 1) Apply common software features (such as a thesaurus, formulas, charts, graphics, and sounds) to enhance communication and to support creativity.
- 2) Use a variety of technology resources, including the Internet, to increase learning and productivity.
- 3) Explore basic applications that promote creativity (such as graphics, presentation, photo-editing, programming, and video-editing).
- 4) Use available utilities for editing pictures, images, or charts.
- 5) Use collaborative tools to design, develop, and enhance materials, publications, or presentations.

Technology Communications Tools

By the end of grade 8 each student will:

- 1) Use a variety of telecommunication tools (such as e-mail, discussion groups, IM, chat rooms, blogs, video-conferences, and web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences.
- 2) Create a project (such as presentation, web page, newsletter, information brochure) using a variety of media and formats (such as graphs, charts, audio, graphics, and video) to present content information to an audience.

Technology Research Tools

By the end of grade 8 each student will:

- 1) Use a variety of Web search engines to locate information.
- 2) Evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness.
- 3) Identify types of Internet sites based on their domain names (such as edu, com, org, gov, and au).
- 4) Know how to create and populate a database.
- 5) Perform queries on existing databases.
- 6) Know how to create and modify a simple database report.
- 7) Evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task.

Technology Problem-Solving and Decision-Making Tools

By the end of grade 8 each student will:

High School (9-12)

Basic Operations and Concepts

By the end of grade 12 each student will:

- 1) Discuss emerging technology resources (such as podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, and global positioning software).
- 2) Identify the capabilities and limitations of emerging communication resources.
- 3) Understand the importance of both the predictable and unpredictable impacts of technology.
- 4) Identify changes in hardware and software systems over time and discuss how these changes might affect the individual personally in his or her role as a lifelong learner.
- 5) Understand the purpose, scope, and use of assistive technology.
- 6) Understand that access to online learning increases educational and workplace opportunities.
- 7) Be provided with the opportunity to learn in a virtual environment as a strategy to build 21st century learning skills.
- 8) Understand the relationship between electronic resources, infrastructure, and connectivity.
- 9) Routinely apply touch-typing techniques with advanced accuracy, speed, and efficiency.
- 10) Assess and solve hardware and software problems by using online help or other user documentation and support.
- 11) Identify common graphic, audio, and video file formats (such as jpeg, gif, bmp, mpeg, and wav).
- 12) Demonstrate how to import and export text, graphics, and audio files.
- 13) Proofread and edit writing using appropriate resources (such as a software or online dictionaries, spell check, grammar check, grammar references, and writing references) and grade level appropriate checklists both as individuals and in groups.

Social, Ethical, and Human Issues

By the end of grade 12 each student will:

- 1) Identify legal and ethical issues related to use of information and communication technology.
- 2) Analyze current trends in information and communication technology and assess the

- 6) Demonstrate the ethical use of technology as a digital citizen and lifelong learner.
- 7) Explain the differences between freeware, shareware, and commercial software.
- 8) Adhere to fair use and copyright guidelines.
- 9) Create appropriate citations for resources when presenting research findings.
- 10) Adhere to the district acceptable use policy as well as state and federal laws.
- 11) Explore career opportunities and identify their related technology skill requirements.
- 12) Design and implement a personal learning plan that includes technology to support his or her lifelong learning goals.

Technology Productivity Tools

By the end of grade 12 each student will:

- 1) Complete at least one online credit, or non-credit, course or online learning experience.
- 2) Use technology tools for managing and communicating personal information (such as finances, contact information, schedules, purchases, and correspondence).
- 3) Have access to and utilize assistive technology tools.
- 4) Apply advanced software features (such as an application's built-in thesaurus, templates, and styles) to improve the appearance of word processing documents, spreadsheets, and presentations.
- 5) Identify technology tools (such as authoring tools and other hardware and software resources) that could be used to create a group project.
- 6) Use an online tutorial and discuss the benefits and disadvantages of this method of learning.
- 7) Develop a document or file for inclusion into a web site or web page.
- 8) Use a variety of applications to plan, create, and edit a multimedia product (such as a model, webcast, presentation, publication, and other creative work).
- 9) Have the opportunity to participate in real-life experiences associated with technology-related careers.

Technology Communications Tools

By the end of grade 12 each student will:

- 1) Identify and describe various telecommunications or online technologies (such as desktop conferencing, listservs, wikis, blogs, and virtual reality).
- 2) Use available technologies (such as desktop conferencing, e-mail, groupware, and

- 5) Plan and implement a collaborative project using telecommunications tools (such as groupware, interactive web sites, and videoconferencing).

Technology Research Tools

By the end of grade 12 each student will:

- 1) Compare, evaluate, and select appropriate Internet search engines to locate information.
- 2) Formulate and use evaluation criteria (such as authority, accuracy, relevancy, and timeliness) for information located on the Internet to present research findings.
- 3) Determine if online sources are authoritative, valid, reliable, relevant, and comprehensive.
- 4) Distinguish between fact, opinion, point of view, and inference in online information.
- 5) Evaluate online resources for stereotyping, prejudice, and misrepresentation.
- 6) Develop a plan to gather information using various research strategies (such as interviews, questionnaires, experiments, and online surveys).

Technology Problem-Solving and Decision-Making Tools

By the end of grade 12 each student will:

- 1) Use a variety of technology resources (such as educational software, simulations, and models) for problem solving and independent learning.
- 2) Describe the possible integration of two or more information and communication technology tools or resources to collaborate with peers, community members, and field experts.
- 3) Formulate a research question or hypothesis, then use appropriate information and communication technology resources to collect relevant information, analyze the findings, and report the results to multiple audiences.

V Student Achievement

Strategies that integrate technology into curricula and instruction

Elementary (K-2)

Using the Michigan Department of Education's *Educational Technology Standards & Expectations Grades K-2* document¹ as a guide, the district will evaluate students in K through grade 2 by the end of grade 2 to determine technology competence. The district will use the *Michigan Educational Technology Standards (METS) - K-8 Checklist by Grade Levels* document² for this evaluation, and each item addressed for the K through grade 2 levels in the checklist will be marked using the following to indicate the item is completed:

Mark	Type of Evaluation
A	Formal Assessment
C	Technology Literacy Class
O	Teacher Observation
P	Portfolio Evidence

Basic Operations and Concepts

Students demonstrate a sound understanding of the nature and operation of technology systems.

- 1) Students understand that people use many types of technologies in their daily lives (such as computers, cameras, audio and video players, phones, and televisions).
- 2) Students identify common uses of technology found in daily life.
- 3) Students recognize, name, and label the major hardware components in a computer system (such as computer, monitor, keyboard, mouse, and printer).
- 4) Students identify the functions of the major hardware components in a computer system.
- 5) Students discuss the basic care of computer hardware and various media types (such as diskettes, CDs, DVDs, and videotapes).
- 6) Students proofread and edit their writing using appropriate resources including dictionaries and a class-developed checklist both individually and as a group.

Students are proficient in the use of technology.

- 1) Students use various age-appropriate technologies for gathering information (such as dictionaries, encyclopedias, audio and video players, phones, and web resources).
- 2) Students use a variety of age-appropriate technologies for sharing information (such as drawing pictures and writing stories).
- 3) Students recognize the functions of basic file menu commands (such as New, Open, Close, Save, and Print).

Social, Ethical, and Human Issues

Students understand the ethical, cultural, and societal issues related to technology.

- 1) Students identify common uses of information and communication technologies.
- 2) Students discuss advantages and disadvantages of using 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.

- 1) Students understand that technology is a tool to help them complete a task.
- 2) Students understand that technology is a source of information, learning and entertainment.
- 3) Students can identify places in the community where one can access technology.

Technology Productivity Tools

Students use technology tools to enhance learning, increase productivity, and promote creativity.

- 1) Students know how to use a variety of productivity software (such as word processors, drawing tools, and presentation software) to convey ideas and illustrate concepts.
- 2) Students will be able to recognize the best type of productivity software to use for age-appropriate tasks (such as word-processing, drawing, and web browsing).

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

- 1) Students are aware of how to work with others when using technology tools (such as word processors, drawing tools, and presentation software) to convey ideas or illustrate simple concepts relating to a specified project.

Technology Communications Tools

Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.

- 1) Students will identify procedures for safely using basic telecommunication tools (such as e-mail and phones) with assistance from teachers, parents, or student partners.

Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

- 1) Students know how to use age-appropriate media (such as presentation software, newsletters, and brochures) to communicate ideas to classmates, families, and others.
- 2) Students will know how to select media formats (such as text, graphics, photos, and video) – with assistance from teachers, parents, or student partners – to communicate and share ideas with classmates, families, and others.

Technology Research Tools

Students use technology tools to process data and report results.

- 1) Students will interpret simple information from existing age-appropriate electronic databases (such as dictionaries, encyclopedias, and spreadsheets) with assistance from teachers, parents, or student partners.

Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

- 1) Students can provide a rationale for choosing one type of technology over another for completing a specific task.

Technology Problem-Solving and Decision-Making Tools

Students use technology resources for solving problems and making informed decisions.

- 1) Students discuss how to use technology resources (such as dictionaries, encyclopedias, search engines, and websites) to solve age-appropriate problems.

Students employ technology in the development of strategies for solving problems in the real world.

- 1) Students identify ways that technology has been used to address real-world problems (personal or community).

Elementary (3-5)

Using the Michigan Department of Education's *Educational Technology Standards & Expectations Grades 3 - 5* document³ as a guide, the district will evaluate students in grades 3 through 5 by the end of grade 5 to determine technology competence. The district will use the *Michigan Educational Technology Standards (METS) - K-8 Checklist by Grade Levels* document⁴ for this evaluation, and each item addressed for the grade 3 through 5 levels in the checklist will be marked using the following to indicate the item is completed:

Mark	Type of Evaluation
A	Formal Assessment
C	Technology Literacy Class
O	Teacher Observation
P	Portfolio Evidence

Basic Operations and Concepts

Students demonstrate a sound understanding of the nature and operation of technology systems.

- 1) Students discuss ways technology has changed life at school and at home.
- 2) Students discuss ways technology has changed business and government over

- 4) Students recognize and discuss the need for security applications (such as virus detection, spam defense, popup blockers, and firewalls) to help protect information and to keep the system functioning properly.
- 5) Students discuss ways technology has changed business and government over time.
- 6) Students recognize and discuss the need for security applications (such as virus detection, spam defense, popup blockers, and firewalls) to help protect information and to keep the system functioning properly.

Students are proficient in the use of technology.

- 1) Students know how to use basic input and output devices and other peripherals (such as scanners, digital cameras, and video projectors).
- 2) Students know proper keyboarding positions and touch-typing techniques.
- 3) Students manage and maintain files on a hard drive or the network.
- 4) Students demonstrate proper care in the use of hardware, software, peripherals, and storage media.
- 5) Students know how to exchange files with other students using technology (such as e-mail attachments, network file sharing, diskettes, and flash drives).
- 6) Students identify which types of software can be used most effectively for different types of data, for different information needs, or for conveying results to different audiences.
- 7) Students identify search strategies for locating needed information on the Internet.
- 8) Students proofread and edit writing using appropriate resources (such as a software or online dictionary, spell check, grammar check, grammar references, and writing references) and grade level appropriate checklists both individually and in groups.

Students understand the ethical, cultural, and societal issues related to technology.

- 1) Students identify cultural and societal issues relating to technology.
- 2) Students discuss how information and communication technology supports collaboration, productivity, and lifelong learning.
- 3) Students discuss how various assistive technologies can benefit individuals with disabilities.
- 4) Students discuss the accuracy, relevance, appropriateness, and bias of electronic information sources.

Students practice responsible use of technology systems, information, and software.

- 1) Students discuss scenarios describing acceptable and unacceptable uses of

- 4) Students identify appropriate kinds of information that should be shared in public chat rooms.
- 5) Students identify safety precautions that should be taken while on-line.

Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

- 1) Students explore various technology resources that could assist them in pursuing personal goals.
- 2) Students identify technology resources and describe how those resources improve the ability to communicate, increase productivity, or help them achieve personal goals.

Technology Productivity Tools

Students use technology tools to enhance learning, increase productivity, and promote creativity.

- 1) Students know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (such as a dictionary, thesaurus, and spell-checker).
- 2) Students know how to insert various objects (such as photos, graphics, sound, and video) into word processing documents, presentations, or web documents.
- 3) Students use a variety of technology tools and applications to promote their creativity.
- 4) Students understand that existing (and future) technologies are the result of human creativity.

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

- 1) Students collaborate with classmates using a variety of technology tools to plan, organize, and create a group project.

Technology Communications Tools

Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.

- 1) Students use basic telecommunication tools (such as e-mail, Web Quests, IM, blogs, chat rooms, and web conferencing) for collaborative projects with other students.

Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

- 1) Students use a variety of media and formats to create and edit products (such as

Technology Research Tools

Students use technology to locate, evaluate, and collect information from a variety of sources.

- 1) Students use Web search engines and built-in search functions of other various resources to locate information.
- 2) Students describe basic guidelines for determining the validity of information accessed from various sources (such as web sites, dictionaries, on-line newspapers, and CD-ROM).

Students use technology tools to process data and report results.

- 1) Students know how to independently use existing databases (such as library catalogs, electronic dictionaries, and encyclopedias) to locate, sort, and interpret information on an assigned topic.
- 2) Students perform simple queries on existing databases and report results on an assigned topic.

Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

- 1) Students identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource.
- 2) Students compare and contrast the functions and capabilities of the word processor, database, and spreadsheet for gathering data, processing data, performing calculations, and reporting results.

Technology Problem-Solving and Decision-Making Tools

Students use technology resources for solving problems and making informed decisions.

- 1) Students use technology resources to access information that can assist them in making informed decisions about everyday matters (such as which movie to see and which product to purchase).

Students employ technology in the development of strategies for solving problems in the real world.

- 1) Students use information and communication technology tools (such as calculators, probes, videos, DVDs, and educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community).

Middle School (6-8)

Using the Michigan Department of Education's Educational Technology Standards & Expectations Grades 6 - 8 document⁵ as a guide, the district will evaluate students in grades 6 through 8 by the end of grade 8 to determine technology competence. The district

Mark	Type of Evaluation
A	Formal Assessment
C	Technology Literacy Class
O	Teacher Observation
P	Portfolio Evidence

Basic Operations and Concepts

Students demonstrate a sound understanding of the nature and operation of technology systems.

- 1) Students understand that new technology tools can be developed to do what could not be done without the use of technology.
- 2) Students describe strategies for identifying, and preventing routine hardware and software problems that may occur during everyday technology use.
- 3) Students identify changes in hardware and software systems over time and discuss how these changes affected various groups (such as individual users, education, government, and businesses).
- 4) Students discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving.
- 5) Students identify characteristics that suggest that the computer system hardware or software might need to be upgraded.

Students are proficient in the use of technology.

- 1) Students use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer.
- 2) Students use accurate technology terminology.
- 3) Students use a variety of technology tools (such as software or online dictionaries, thesaurus, grammar checker, and calculator) to maximize the accuracy of technology-produced products.
- 4) Students identify a variety of information storage devices (such as diskettes, CDs, DVDs, flash drives, and tapes) and provide a rationale for using a certain device for a specific purpose.
- 5) Students identify technology resources that assist with various consumer related activities (such as budgets, purchases, banking transactions, and product descriptions).
- 6) Students can identify appropriate file formats for a variety of applications.

Social, Ethical, and Human Issues

Students understand the ethical, cultural, and societal issues related to technology.

- 1) Students understand the potential risks and dangers associated with on-line communications.
- 2) Students identify security issues related to e-commerce.
- 3) Students describe possible consequences and costs related to unethical use of information and communication technologies.
- 4) Students discuss the impact of technology on society in the future.

Students practice responsible use of technology systems, information, and software.

- 1) Students provide accurate citations when referencing information from outside sources in electronic reports.
- 2) Students discuss issues related to acceptable and responsible use of technology (such as privacy, security, copyright, plagiarism, spam, viruses, and file sharing).

Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

- 1) Students use technology to identify and explore various occupations or careers.
- 2) Students discuss uses of technology (present and future) to support personal pursuits and lifelong learning.
- 3) Students identify uses of technology to support communication with peers, family, and school personnel.

Technology Productivity Tools

Students use technology tools to enhance learning, increase productivity, and promote creativity.

- 1) Students apply common software features (such as a thesaurus, formulas, charts, graphics, and sounds) to enhance communication and to support creativity.
- 2) Students use a variety of resources, including the Internet, to increase learning and productivity.
- 3) Students explore basic applications that promote creativity (such as graphics, presentation, photo editing, programming, and video editing).
- 4) Students use available utilities for editing pictures, images, or charts.

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

- 1) Students use collaborative tools to design, develop, and enhance materials.

Technology Communications Tools

Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.

- 1) Students use a variety of telecommunication tools (such as e-mail, discussion groups, IM, chat rooms, blogs, videoconferences, and web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences.

Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

- 1) Students create projects (such as presentations, web pages, newsletters, and information brochures) using a variety of media and formats (such as graphs, charts, audio, graphics, and video) to present content information to an audience.

Technology Research Tools

Students use technology to locate, evaluate, and collect information from a variety of sources.

- 1) Students use a variety of Web search engines to locate information.
- 2) Students evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness.
- 3) Students can identify types of Internet sites based on their domain names (such as edu, com, org, gov, and au).

Students use technology tools to process data and report results.

- 1) Students know how to create and populate a database.
- 2) Students can perform queries on existing databases.
- 3) Students know how to create and modify a simple database report.

Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

- 1) Students evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task.

Technology Problem-Solving and Decision-Making Tools

Students use technology resources for solving problems and making informed decisions.

- 1) Students use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist them with solving a basic problem.

Students employ technology in the development of strategies for solving problems in the

High School (9-12)

Using the Michigan Department of Education's *Educational Technology Standards & Expectations Grades 9 - 12* document⁷ as a guide, the district will evaluate students in grades 9 through 12 by the end of grade 12 to determine technology competence. The district will use the *Michigan Educational Technology Standards (METS) – 9th to 12th Checklist* document⁸ for this evaluation, and each item addressed for the grade 9 through 12 levels in the checklist will be marked using the following to indicate the item is completed:

Mark	Type of Evaluation
A	Formal Assessment
C	Technology Literacy Class
O	Teacher Observation
P	Portfolio Evidence

Basic Operations and Concepts

Students demonstrate a sound understanding of the nature and operation of technology systems.

- 1) Students discuss emerging technology resources (such as podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, and global positioning software).
- 2) Students identify the capabilities and limitations of emerging communication resources.
- 3) Students understand the importance of both the predictable and unpredictable impacts of technology.
- 4) Students identify changes in hardware and software systems over time and discuss how these changes might affect them personally in their role as a lifelong learner.
- 5) Students understand the purpose, scope, and use of assistive technology.
- 6) Students understand that access to online learning increases educational and workplace opportunities.

Students are proficient in the use of technology.

- 1) Students will be provided with the opportunity to learn in a virtual environment as a strategy to build 21st century learning skills.
- 2) Students understand the relationship between electronic resources, infrastructure, and connectivity.
- 3) Students will routinely apply touch typing techniques with accuracy, speed, and

- 5) Students identify common graphic, audio, and video file formats (such as jpeg, gif, bmp, mpeg, and wav).
- 6) Students demonstrate how to import and export text, graphics, or audio files.
- 7) Students proofread and edit a document using an application's spelling and grammar checking functions.

Social, Ethical, and Human Issues

Students understand the ethical, cultural, and societal issues related to technology.

- 1) Students identify legal and ethical issues related to use of information and communication technology.
- 2) Students analyze current trends in information and communication technology and assess the potential of emerging technologies for ethical and unethical uses.
- 3) Students discuss possible long-range effects of unethical uses of technology (such as virus spreading, file pirating, and hacking) on cultures and society.
- 4) Students discuss the possible consequences and costs of unethical uses of information and computer technology.

Students practice responsible use of technology systems, information, and software.

- 1) Students identify ways that individuals can protect their technology systems from unethical or unscrupulous users.
- 2) Students demonstrate the ethical use of technology as a digital citizen and lifelong learner.
- 3) Students explain the differences between freeware, shareware, and commercial software.
- 4) Students adhere to fair use and copyright guidelines.
- 5) Students create appropriate citations for resources when presenting research findings.
- 6) Students adhere to the district acceptable use policy as well as state and federal laws.

Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

- 1) Students explore career opportunities and identify their related technology skill requirements.
- 2) Students design and implement a personal learning plan that includes technology to support their lifelong learning goals.

- 2) Students use technology tools for managing and communicating personal information (such as finances, contact information, schedules, purchases, and correspondence).
- 3) Students have access to, and utilize, assistive technology tools.
- 4) Students apply advanced software features such as an application's built-in thesaurus, templates, and styles to improve the appearance of word processing documents, spreadsheets, and presentations.
- 5) Students use an online tutorial and discuss the benefits and disadvantages of this method of learning.
- 6) Students develop a document or file for inclusion into a web site or web page.
- 7) Students use a variety of applications to plan, create, and edit a multimedia product (such as a model, webcast, presentation, publication, and other creative work).
- 8) Students have the opportunity to participate in real-life experiences associated with technology-related careers.

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

- 1) Students identify technology tools (such as authoring tools or other hardware and software resources) that could be used to create a group project.

Technology Communications Tools

Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.

- 1) Students identify and describe various telecommunications or online technologies (such as desktop conferencing, listservs, blogs, and virtual reality).
- 2) Students use available technologies (such as desktop conferencing, e-mail, groupware, and instant messaging) to communicate with others on a class assignment or project.
- 3) Students collaborate in content-related projects that integrate a variety of media (such as print, audio, video, graphic, simulations, and models) with presentation, word processing, publishing, database, graphics design, or spreadsheet applications.
- 4) Students plan and implement a collaborative project using telecommunications tools (such as groupware, interactive web sites, and videoconferencing).

Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

- 1) Students use a variety of media and formats to design, develop, publish, and present

- 2) Students determine if online sources are authoritative, valid, reliable, relevant, and comprehensive.
- 3) Students distinguish between fact, opinion, point of view, and inference.
- 4) Students evaluate resources for stereotyping, prejudice, and misrepresentation.

Students use technology tools to process data and report results.

- 1) Students formulate and use evaluation criteria (such as authority, accuracy, relevancy, and timeliness) for information located on the Internet to present research findings.

Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

- 1) Students develop a plan to gather information using various research strategies (such as interviews, questionnaires, experiments, and online surveys).

Technology Problem-Solving and Decision-Making Tools

Students use technology resources for solving problems and making informed decisions.

- 1) Students use a variety of technology resources (such as educational software, simulations, and models) for problem solving and independent learning.
- 2) Students describe the possible integration of two or more information and communication technology tools or resources to collaborate with peers, community members, and field experts.

Students employ technology in the development of strategies for solving problems in the real world.

- 1) Students formulate a research question or hypothesis, then use appropriate information and communication technology resources to collect relevant information, analyze the findings, and report the results to multiple audiences.

VI Technology Delivery

Strategies for the delivery of courses and curricula through the use of technology, including distance learning

Superior Central School District continues to identify and incorporate the best practices in technology-enabled teaching and is making available to students a variety of customized and individualized technology delivery systems that meet their needs.

Basic technology delivery includes internet availability to all K-12 grade classrooms. Teachers have access to United Streaming Video through the MAISD/REMC, and Michigan Virtual University is available for AP coursework or individual student access to online courses (such as French and Japanese).

Elementary (K-5)

Elementary students use technology to create documents, research online materials, access the regional library catalog, and visit with other students in distant locations via e-mail.

They are using e-mail to enhance their course studies by having e-mail buddies that are known to the students who keep in contact with the classes while traveling across country (such as over-the-road truckers and ore freighter personnel).

Middle School (6-8)

Middle school students are using TechCONNECT e-text materials to produce reports, presentations, and spreadsheets for cross curriculum projects.

Offerings in online foreign language classes will be available by the fall of 2009.

High School (9-12)

High school students are relying on the Internet to provide them information and materials necessary for much of the Business Management and Administration curriculum. This includes career exploration, financial awareness and skills, entrepreneurship, and business planning as well as many other projects and objectives.

Courses are provided through Michigan Virtual Schools, Michigan Technological University, Northern Michigan University, and other online schools and colleges for all skill levels.

Online learning provides student access to unique and challenging courses such as advanced placement classes, unique elective classes (such as Space Exploration), a variety of foreign languages, and other enriching learning opportunities not traditionally available to students in a small, rural area such as Superior Central's district. This provides the student the same opportunities taken for granted in other large urban districts.

VII Parental Communications & Community Relations

Strategies to involve parents and to increase communications with the parents and the community

How the Plan Will Be Distributed To the Community

Our school technology plan, board meeting minutes, committee and teacher meeting minutes, school calendar, daily attendance, individual student academic progress (MEAP), and school newsletter will be available to the community through our school web site. Annual report meetings are announced to the community via the school district newsletter. Copies of all reports are available on request.

Additional Means of Communicating With Parents via Technology

Parents must read and sign the *Student Technology Usage Agreement* (refer to Appendix A) prior to their students' Internet usage. Technology is used to print report cards and

District Delivery Resources

Superior Central School uses all of the following resources to deliver information to the community:

- District Web page - <http://superiorcentralschools.org/>
- *Grade Pro* software for grades and progress reports
- *Mining Journal* daily newspaper
- Regional radio and television stations
- School newsletters
- *School Notes* - www.schoolnotes.com
- Student, staff, and administration technology presentations to the public at school board meetings

Involvement of the Community with the Technology Plan

Our School Improvement Team works with the Technology Team concerning the technology plan and acceptable use policies. The publicized meetings are open to the community. Teachers and administrators gather input from parents at parent-teacher conferences, open houses and other school events. This input is used in the development of policy and planning and in the evaluation process.

VIII Collaboration

Strategies for developing an adult literacy program

In previous years, the Superior Central School District has offered several evening computer classes. Adults were able to use the business lab with an instructor to learn computer skills. We presented an evening class where students would bring in their parents to help teach them how to use a computer. However, because of funding and, at times, lack of interest these programs were not offered on a consistent basis.

Currently, there are no adult literacy services offered at Superior Central, and there are no plans within the next three years to offer these services. Because MARESA offers these classes, this element is not applicable to the Superior Central School District.

IX Professional Development

Strategies for providing ongoing professional development for teachers, administration, and staff to ensure all know how to use new technologies to improve educational delivery

Professional development programs that are successful and effective in either transferring information, acquiring skills, or changing behavior are invariably linked to establishing a

To this end, Superior Central has set the following professional development goals:

- Create a learning community with respect to technology and education where teachers, administrators, and staff take on the various roles of educator, learner, mentor, and facilitator
- Improve the technological competence of the staff
- Integrate technology tools into new and existing curriculum and instruction to accomplish the larger goals and mission of the school. Ultimately, this integration must provide enhanced learning opportunities for our students as well as for our staff.

Strategies to Accomplish These Goals

Superior Central has established the following strategies to meet professional development goals:

- Workshops offered during professional development days will be determined by need. Workshops will be offered in a variety of formats (such as one-on-one mentoring, outside experts, small group exploration, and study and collaboration).
- Staff will be encouraged and supported with time and substitute teachers to observe other classrooms, to mentor or be mentored, and to assist with “just-in-time” learning in order to provide on-going, sustained technology-based teaching.
- To put staff in charge of their own learning, staff will submit a short request outlining their specific need and their learning plan in order to use the professional development time available to their own advantage.
- To provide knowledge and access to the technological tools available within the district and their potential application within the curriculum, an annual effort to communicate about technology integration within the district will take place. This may take the form of an in-service, a “show and tell” forum, a catalog of compiled projects, or a collection of newsletter articles that feature the integration of technology within the curriculum.
- All teachers will complete a one-page Technology Use Self Evaluation tool annually. (refer to *Appendix B*). The construction of this tool will address the state and national standards for technology competencies. The tool will form the basis for the district’s professional development efforts. The tool will do the following:
 - Assist the teacher in assessing their own progress in integrating technology tools into their professional lives and their curriculum objectives
 - Assist the teacher in identifying areas of expertise and areas where training is needed
 - Assist in focusing technology professional development efforts for the staff

X Supporting Resources

Strategies and support for acquiring resources required to ensure successful and effective use of technology

The following resources support and demonstrate our technology integration efforts at Superior Central School:

Human Resources

- Art teachers – graphic arts, drawing, and CAD design expertise
- Business Technology teacher – office application software, publishing software, Internet searching expertise, and coordinator for online instruction
- Certified library and media specialist – Internet searching, library media organization, and access expertise
- Contracted technology coordinator – network solutions and Web expertise
- Technology support staff from MARESA, Upper Peninsula Library consortia, and school management software companies

Network Resources

- Implementation of Accelerated Reader for 1st – 8th grades
- Michigan Virtual Schools and LearnPort access
- On-line databases provided through affiliation with the Library of Michigan
- SIRSI automated circulation system for library access
- Use of STAR Reading Assessment for K – 12
- Video and audio book lending library

Organizational Resources

- Marquette Alger Regional Service Agency (MARESA)
- Michigan Association of Computers Users in Learning (MACUL)
- Michigan Association of Media in Education (MAME)
- Upper Peninsula Region of Library Cooperation (UPRLC)
 - Automated Library Services (ALS) – consortia of 70 libraries who share their collections via interlibrary loan over the Internet

District Policies

- Superior Central School *Staff Technology Usage Agreement*

XI Infrastructure Needs / Technical Specifications and Design

Strategies to identify hardware, software, infrastructure, and other services to improve education services

Current Infrastructure

The Superior Central School District network consists of the following:

- A Linux server for administration and accounting
- A Novell server for applications and student data
- A school wide LAN with 3 main servers
- A Windows XP computer for the updating and distribution of the antivirus and antispyware definitions and the monitoring of student and staff activity

There are 160 computers on the network divided into:

- Nine computers across three special education labs
- One 10-computer media center
- One 20-computer Resource lab
- One 24-computer Business lab
- One 24-computer Elementary school lab
- Ten administration computers
- Remainder of equipment is located throughout the building for teacher and student use

Additional equipment includes:

- One industrial plotter
- Two network copiers
- Two scanners
- Three video cameras
- Three digital microscopes
- Nine LCD projectors
- 14 printers
- 25 digital cameras
- 57 Alpha-Smarts in the elementary school

- CAD
- Dreamweaver
- eTerm
- Final Cut Express
- Flash
- iMovie
- Microsoft Office 2000
- MyDreamExplorer
- PhotoShop
- Star Reading
- Type-to-Learn
- Word Prediction

Superior Central is a member of the Library Services Consortium and the Library of Michigan Electronic Data Bases, through which we receive books, magazines, newspapers, and eBooks.

Future Infrastructure Needs

The following is a list of future needs:

- Computer graphics lab
- Digital SLR cameras
- High speed wireless network
- PDA / iPod support
- Portable laptop lab
- Replace remaining computers in the business lab
- Software upgrades
- Upgrade / replace classroom computers
- Video digital cameras

XII Increase Access

Strategies to increase access to technology for all students, teachers, staff, and administration

Infrastructure Change	Start Year
Wireless cell phone support	2008
Assisted technology (speech, audio, and writing)	2008 to 2011
Upgrade school network infrastructure	2008 to 2011
High-speed wireless network	2010
Portable lab (50 wireless laptops)	2010

XIII Funding and Budget Timetable

Timeline for acquisition of technology resources required to improve student academic achievement

Activity	2008-2009	2009-2010	2010-2011
Capital Outlay			
Hardware and software	7,500	8,000	8,500
District software upgrades	2,500	3,000	3,500
Contracted Services			
Internet connections	12,800	13,200	13,580
UPRLC	2,684	2,738	2,792
e-School (maintenance and support)	11,110	11,110	11,110
Travel and workshops	2,000	2,000	2,000
Technical Coordinator contract	20,800	21,424	22,067
Total Costs	67,394	69,472	71,549
Resources			
General fund	54,871	56,972	59,049
Federal resources	12,523	12,500	12,500
Grants			
Total Resources	67,394	69,472	71,549

XIV Funding and Budget Coordination of Resources

Strategies to coordinate state and local resources to implement technology activities

XV Monitoring and Evaluation

Strategies to evaluate technology activities to increase the ability of teachers to teach, and to enable students to reach challenging state and national academic standards

The district technology team will evaluate the technology activities and initiatives of this plan annually to determine the impact and effectiveness of integrating technology into the teaching and learning environment. The district technology plan will be updated to reflect the findings of the evaluation.

The evaluation will include teacher and student surveys and interviews, technology team analysis of student-produced materials (such as videos, presentations, and websites), and MARESA evaluation of technology implementation. Additional measurements will be obtained from technology coordinator logs of maintenance, repair, and upgrades performed throughout the school year.

The district technology team will meet a minimum of once per semester to evaluate district technology goals. Unmet goals will be addressed by the district's technology team in the following manner:

- Discuss reasons why goals are not met
- Decide whether to modify existing strategies or to replace them with new strategies to achieve the goal
- Decide on a timetable both for implementation of changes and for re-evaluation to determine if goal is met
- Assign a team member primary responsibility for monitoring the evaluation.

Teachers are responsible for monitoring the student use of the Internet at all times. The technology coordinator will ensure that all students, staff, and authorized users have a signed technology agreement on file. This monitoring will include enabling or disabling access for those that either do not have a signed agreement, or for those that violates the terms and conditions in the agreements.

XVI Acceptable Use Policy

Strategies are in place to monitor the district's Acceptable Use Plan for staff and student use of technologies.

All students, staff, and authorized users of the Superior Central School District infrastructure are required to sign a technology agreement. The technology agreement covers what is considered acceptable and unacceptable use of district technology resources. Refer to Appendix A for the *Student Technology Usage Agreement* and the *Staff Technology Usage Agreement*.

A Technology Agreements

Staff Technology Usage Agreement

The Superior Central School District *Staff Technology Usage Agreement* is located at www.superiorcentralschools.org/documents/staff_technology_usage_agreement.pdf.

Student Technology Usage Agreement

The Superior Central School District *Student Technology Usage Agreement* is located at www.superiorcentralschools.org/documents/student_technology_usage_agreement.pdf.

B Teacher Technology Use Self Evaluation

Teacher Technology Use Self Evaluation

The Superior Central School District *Staff Teacher Technology Use Self Evaluation* is located at www.superiorcentralschools.org/documents/teacher_technology_evaluation.pdf.