

Public Schools of Calumet-Laurium-Keweenaw Technology Plan



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Introduction

District Profile

The Public Schools of Calumet, Laurium and Keweenaw are located in the pristine Keweenaw Peninsula in Michigan's Upper Peninsula. Our school, originally established in 1867, is rich in history and steeped in tradition. We are the most northern K-12 school district in the State of Michigan and are committed to excellence. The District is proud of its educational programs and exceptional staff. Our goal is to develop and support, within the context of the District's vision and goals, a strategic mix of programs and courses that meet the needs and values of all our students and their families.

Public Schools of Calumet-Laurium-Keweenaw Mission Statement

The mission of the Calumet, Laurium and Keweenaw School District is to educate young people in a safe and orderly environment where lifelong essential learning skills are taught and mastered, initiative is encouraged and achievement is recognized.

School Buildings

CLK Elementary (Grades K-5)

Enrollment-687

Teachers-30

Mission Statement: We are committed to educating all students to become life-long learners by providing children and adults with a positive, supportive and safe environment.

Washington Middle (Grades 6-8)

Enrollment-347

Teachers-26

Mission Statement: Washington Middle School is an integral part of the educational community which provides all students opportunities to succeed academically and participate responsibly in an ever-changing society.

Horizons Alternative High (Grades 9-12)

Enrollment-49

Teachers-7

Mission Statement: It is the mission of Horizons Alternative High School to actively provide a students-first, safe, family oriented learning environment. Our priority is to promote character, self-esteem and motivation to foster success in academics and society.

Calumet High (Grades 9-12)

Enrollment-402

Teachers-27

Mission Statement: The mission of Calumet High School is to educate all students in a supportive, challenging, and disciplined environment to become lifelong learners whose performance is a credit to themselves and society.

Background

The creation of our district's technology plan began during the 1996-1997 school year. Through the vision and hard work of the individuals involved, a working document was created. Over the years this document has been ever changing as goals are met and new ones set. The rapid state of technological change has required the district's technology committee and technology support staff to continually reevaluate as circumstances change.

Technology Mission Statement

"CLK - Leading with technology for teaching and learning."

Philosophy

Today's students will be part of an ever-changing technological society. Our graduates must have sufficient understanding of technology to ensure that they will continue to be competitive in the workplace and engage in life long learning.

CLK schools are dedicated to providing our students, administration, faculty, staff and supporting community with leading-edge resources and the instructional support necessary to use these resources successfully.

Technology Committee Membership

(As of February, 2012)

Michael Roland	Committee Chair
Anton Pintar	Network/Information Administrator
Mark Lucier	District Technician
Donna Kezele	Technology Assistant/Elementary Staff
George Twardzik	High School Principal
Sean Jacques	Assistant High School Principal
Christopher Davidson	Horizons High School Principal
Mary Niebuhr	Elementary School Principal
Karyn King	Elementary School Principal
Carl Arko	Elementary School Teacher
Larry Danis	Elementary School teacher
Lisa Twardzik	High School Teacher
Karen Lacross	High School Teacher
Joseph Heflin	High School Teacher
Michael Steber	Middle School Principal
Julie Goldsworthy	Middle School Teacher
Margery Gronlund	Middle School Teacher
Mark Koski	Middle School Teacher
Steve Lancour	Middle School Teacher

Vision and Goals

Students

It is the goal of CLK Schools that all students will have the skills to work effectively in the technological global society

All students will:

1. function in the electronic world in a legal and ethical manner using modern computers and network resources
2. communicate effectively through electronic media including email, telephony and video conferencing
3. select, access and use electronic information resources, through Internet and library services and resources
4. select and use appropriate modern software applications
5. understand and apply technological terms
6. use common peripheral devices including printers (networked), alternative storage devices and image processing devices
7. have ready access to technology resources
8. identify the health risks and safety issues involved in technology usage
9. have access to technology anywhere/anytime through wireless networking and one student per computer

Administration, Faculty and Staff

It is the goal of CLK Schools to provide its administration, faculty and staff with tools that allow them to work more effectively and bolster professional growth. The administration, faculty and staff will meet the student goals.

The administration will

1. use Internet access for state/federal administrative tools such as USF/E-Rate, CEPI, MEIS and MDE web sites
2. have the ability to conduct business anywhere/anytime using technology including cell phones with e-mail/Internet access and text messaging, laptop computers with wireless capability and portable computing devices
3. the capability and access to use notification services that will support the district in quickly notifying staff, students and parents of potential emergencies

The faculty and staff will:

1. receive professional development, in-servicing and instruction on new technologies
2. automate administrative tasks such as attendance, grade reporting and scheduling
3. use technology for enhancing instructional methods of: research, information presentation and information retrieval
4. use technology/interactive classroom technology for creative lessons utilizing data projectors with interactive board, large format touch screens/monitor, document cameras (Elmo), digital cameras and digital video

5. have the opportunity to create classroom web pages that contain items such as syllabus, lesson plans , handouts and pre-recorded audio/video presentations
6. be able to communicate among themselves, and administration more efficiently
7. have readily available technical support
8. have the ability to utilize “staff” e-mail and district web pages to improve communication with students, parents and the community

Network Administration

It is the goal of CLK Schools technology administrators to provide for the easy and efficient access of district resources

The technology administrators will

1. upgrade and maintain the infrastructure to ensure that large data files and data streams are efficiently stored, transported and delivered to the desktop
2. maintain and communicate awareness of evolving threats to integrity and privacy of information in the district network

Community

It is the goal of CLK Schools to allow the community easy access to district information and resources. This plan will be made available on our web site as well as in the public library. Requests for copies will be granted.

Through the use of the Electronic grade book system, parents/guardians have access to all of their student’s information via a web portal. District information is also disseminated to the community through to use of blogs, posted daily announcements and on-line calendars that can all be accessed through the district web page.

Curriculum

Educational Technology Standards & Expectations

K – 12

The Public Schools of Calumet-Laurium-Keweenaw have developed curriculum around the technology standards established by the State of Michigan Board of Education. These standards are commonly called METS (Michigan Educational Technology Standards). Each grade level/department has developed and is continually developing detailed plans to integrate these standards in to the learning environment. The desire for these integrations is to make the technology used to become a transparent and effective learning tool in every classroom.

Technology Literacy

Technology literacy is 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. The Standards and Expectations for each grade range are established to designate clearly what students are expected to know by the end of grades two, five, eight, and twelve.

K - 2

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 2 each student will:

1. understand that people use many types of technologies in their daily lives (e.g., computers, cameras, audio/video players, phones, televisions)
2. identify common uses of technology found in daily life
3. recognize, name, and will be able to label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, and printer)
4. identify the functions of the major hardware components in a computer system
5. discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)
6. use various age-appropriate technologies for gathering information (e.g., dictionaries, encyclopedias, audio/video players, phones, web resources)
7. use a variety of age-appropriate technologies for sharing information (e.g., drawing a picture, writing a story)
8. recognize the functions of basic file menu commands (e.g., new, open, close, save, print)
9. proofread and edit their writing using appropriate resources including dictionaries and a class developed checklist
both individually and as a group

SOCIAL, ETHICAL, AND HUMAN ISSUES

By the end of Grade 2 each student will:

1. identify common uses of information and communication technologies
2. discuss advantages and disadvantages of using technology
3. recognize that using a password helps protect the privacy of information
4. discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 911, internet, email) at home or at school
5. discuss the consequences of irresponsible uses of technology resources at home or at school
6. understand that technology is a tool to help complete a task
7. understand that technology is a source of information, learning, and entertainment
8. identify places in the community where one can access technology

TECHNOLOGY PRODUCTIVITY TOOLS

By the end of Grade 2 each student will:

1. know how to use a variety of productivity software (e.g., word processors, drawing tools, presentation software) to convey ideas and illustrate concepts
2. be able to recognize the best type of productivity software to use for certain age-appropriate tasks (e.g., word processing, drawing, web browsing)
3. be aware of how to work with others when using technology tools (e.g., word processors, drawing tools, presentation software) to convey ideas or illustrate simple concepts relating to a specified project

TECHNOLOGY COMMUNICATIONS TOOLS

By the end of Grade 2 each student will:

1. identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teachers, parents, or student partners
2. know how to use age-appropriate media (e.g., presentation software, newsletters, word processors) to communicate ideas to classmates, families, and others
3. know how to select media formats (e.g., text, graphics, photos, video), with assistance from teachers, parents, or student partners, to communicate and share ideas with classmates, families, and others

TECHNOLOGY RESEARCH TOOLS

By the end of Grade 2 each student will:

1. know how to recognize the Web browser and associate it with accessing resources on the internet
2. use a variety of technology resources (e.g., CD-ROMs, DVDs, search engines, websites) to locate or collect information relating to a specific curricular topic with assistance from teachers, parents, or student partners
3. interpret simple information from existing age-appropriate electronic databases (e.g., dictionaries, encyclopedias,

spreadsheets) with assistance from teachers, parents, or student partners
4. provide a rationale for choosing one type of technology over another for completing a specific task

TECHNOLOGY PROBLEM-SOLVING AND DECISION-MAKING TOOLS

By the end of Grade 2 each student will:

1. discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems
2. identify ways that technology has been used to address real-world problems (personal or community)

3-5

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 (e.g., virus detection, spam defense, popup blockers, firewalls) to help protect information and to keep the system functioning properly
4. know how to use basic input/output devices and other peripherals (e.g., scanners, digital cameras, 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 (e.g., e-mail attachments, network file sharing, diskettes, 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
10. identify search strategies for locating needed information on the internet
11. proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups

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 (e.g., computers, digital cameras, cell phones, PDAs, wireless connectivity) and describe consequences of inappropriate use
6. discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, 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, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker)
2. know how to insert various objects (e.g., photos, graphics, sound, 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:

1. use basic telecommunication tools (e.g., e-mail, Web Quests, IM, blogs, chat rooms, web conferencing) for collaborative projects with other students
2. use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences
3. identify how different forms of media and formats may be used to share similar information, depending on the intended audience (e.g., presentations for classmates, 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 (e.g., web site, dictionary, on-line newspaper, CD-ROM)
3. know how to independently use existing databases (e.g., library catalogs, electronic dictionaries, 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 (e.g., which movie to see, which product to purchase)
2. use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community)

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 (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products
4. understand that new technology tools can be developed to do what could not be done without the use of technology
5. describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use
6. identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses)
7. discuss common hardware and software difficulties and identify strategies for troubleshooting 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 (e.g., floppies, CDs, DVDs, flash drives, 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 (e.g., budgets, purchases, banking transactions, 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 (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually 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 (e.g., privacy, security, copyright, plagiarism, spam, viruses, 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 (e.g., thesaurus, formulas, charts, graphics, 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 (e.g., graphics, presentation, photo-editing, programming, 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 (e.g., e-mail, discussion groups, IM, chat rooms, blogs, video-conferences, web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences
2. create a project (e.g., presentation, web page, newsletter, information brochure) using a variety of media and formats (e.g., graphs, charts, audio, graphics, 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 (e.g., edu, com, org, gov, 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:

1. use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem
2. describe the information and communication technology tools to use for collecting information from different sources, analyze findings, and draw conclusions for addressing real-world problems

9-12

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 12 each student will:

1. discuss emerging technology resources (e.g., podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, 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/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 (e.g., jpeg, gif, bmp, mpeg, wav)
12. demonstrate how to import/export text, graphics, or audio files
13. proofread and edit a document using an application's spelling and grammar checking functions

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 potential of emerging technologies for ethical and unethical uses
3. discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society
4. discuss the possible consequences and costs of unethical uses of information and computer technology
5. identify ways that individuals can protect their technology systems from unethical or unscrupulous users
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/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 (e.g., finances, contact information, schedules, purchases, 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 (e.g., authoring tools or 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 (e.g., model, webcast, presentation, publication, or 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 (e.g., desktop conferencing, listservs, blogs, virtual reality)
2. use available technologies (e.g., desktop conferencing, e-mail, groupware, instant messaging) to communicate with others on a class assignment or project
3. use a variety of media and formats to design, develop, publish, and present products (e.g., presentations, newsletters, web sites) to communicate original ideas to multiple audiences
4. collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models) with presentation, word processing, publishing, database, graphics design, or spreadsheet applications
5. plan and implement a collaborative project using telecommunications tools (e.g., groupware, interactive web sites, 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 (authority, accuracy, relevancy, 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
5. evaluate resources for stereotyping, prejudice, and misrepresentation
6. develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, 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 (e.g., educational software, simulations, 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

Library

The school library media program is designed to support the curriculum and to provide the resources necessary to help students master information processing skills and become adults capable of learning over a lifetime. These resources include, but are not limited to, state-of-the-art technology, as well as the facilities necessary to employ that technology.

The library media center provides learners and educators with equitable access to information, ideas, and learning/teaching resources. This is accomplished through an array of on site and distant bodies of information, and communication tools. The goal of the library media program is to develop expertise in locating, evaluating, and using these resources.

Elementary School Computer/Technology Course Objectives

Technology Outcomes for Kindergarten

Basic Operations and Concepts

- Students understand that people use many types of technologies in their daily lives (e.g., computes, cameras, audio/video players, phones, televisions.)
- Students identify common uses of technology found in daily life.
- Students will discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)

Social, ethical, and human issues

- Students discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 911, internet, email) at home or at school.
- Students discuss the consequences of irresponsible uses of technology resources at home or at school.
- Students understand that technology is a source of information, learning, and entertainment.
- Students can identify places in the community where one can access technology.

Technology Communication Tools

- Students will identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teacher, parents, or student partners

Technology Outcomes for First Grade

Basic Operations and Concepts

- Students understand that people use many types of technologies in their daily lives (e.g., computes, cameras, audio/video players, phones, televisions.)
- Students identify common uses of technology found in daily life.
- Students recognize, name, and label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, and printer)
- Students will discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)

Social, ethical, and human issues

- Students discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 911, internet, email) at home or at school.
- Students discuss the consequences of irresponsible uses of technology resources at home or at school.
- Students understand that technology is a tool to help them complete a task.

- Students understand that technology is a source of information, learning, and entertainment.
- Students can identify places in the community where one can access technology.

Technology Communication Tools

- Students will identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teacher, parents, or student partners

Technology Research Tools

- Students know how to recognize the Web browser and associate it with accessing resources on the internet.

Technology Problem-solving and Decision-making Tools

- Students discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems.

Technology Outcomes for Second Grade

Basic Operations and Concepts

- Students identify the functions of the major hardware components in a computer system.
- Students will discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)
- Students proofread and edit their writing using appropriate resources including dictionaries and a class developed checklist both individually and as a group.
- Students use various age-appropriate technologies for gathering information (e.g., dictionaries, encyclopedias, audio/visual players, phones, web resources).
- Students use a variety of age-appropriate technologies for sharing information (e.g., drawing a picture, writing a story).
- Students recognize the functions of basic file menu commands (e.g., new, open, close, save, print).

Social, ethical, and human issues

- Students identify common uses of information and communication technologies.
- Students discuss advantages and disadvantages of using technology.
- Students recognize that using a password helps protect the privacy of information.
- Students understand that technology is a tool to help them complete a task.
- Students understand that technology is a source of information, learning, and entertainment

Technology Productivity Tools

- Students know how to use a variety of productivity software (e.g., word processors, drawing tools, presentation software) to convey ideas and illustrate concepts.

- Students will be able to recognize the best type of productivity software to use for a certain age-appropriate tasks (e.g., word-processing, drawing, web browsing).
- Students are aware of how to work with others when using technology tools (e.g., word processors, drawing tools, presentation software) to convey ideas or illustrate simple concepts relating to a specified project.

Technology Communication Tools

- Students will identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teacher, parents, or student partners.
- Students know how to use age-appropriate media (e.g., presentation software, newsletters, word processors) to communicate ideas to classmates, families, and others.
- Students will know how to select media formats (e.g., text, graphics, photos, video), with assistance from teachers, parents, or student partners, to communicate and share ideas with classmates, families, and others.

Technology Research Tools

- Students will use a variety of technology resources (e.g., CD-ROMs, DVDs, search engines, websites) to locate or collect information relating to a specific curricular topic with assistance from teachers, parents, or student partners.
- Students will interpret simple information from existing age-appropriate electronic databases (e.g., dictionaries, encyclopedias, spreadsheets) with assistance from teachers, parents, or student partners.
- 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 discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems
- Students identify ways that technology has been used to address real-world problems (personal or community).

Technology Outcomes for Third Grade

Basic Operations and Concepts

- Students discuss ways technology has changed life at school and at home.
- Students recognize and discuss the need for security applications (e.g., virus detection, spam defense, popup blockers, firewalls) to help protect information and to keep the system functioning properly.
- Students manage and maintain files on a hard drive or the network.
- Students demonstrate proper care in the use of hardware, software, peripherals, and storage media.
- Students identify search strategies for locating needed information on the internet.

- Students proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups.

Social, ethical, and human issues

- Students identify cultural and societal issues relating to technology.
- Students discuss how information and communication technology supports collaboration, productivity, and lifelong learning.
- Students discuss scenarios describing acceptable and unacceptable uses of technology (e.g., computers, digital cameras, cell-phones, PDAs, wireless connectivity) and describe the consequences of inappropriate use.
- Students discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, plagiarism) and related laws.
- Students use age-appropriate citing of sources for electronic reports.
- Students identify safety precautions that should be taken while on-line.

Technology Productivity Tools

- Students know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker).
- Students know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents.

Technology Communication Tools

- Students use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences.

Technology Research Tools

- Students use Web search engines and built-in search functions of various resources to locate information.
- Students describe basic guidelines for determining the validity of information accessed from various sources (e.g. web site, dictionary, on-line newspaper, CD-ROM).
- Students know how to independently use existing databases (e.g. library catalogs, electronic dictionaries, encyclopedias) to locate, sort and interpret information on an assigned topic.
- Students know how to independently use existing databases (e.g. library catalogs, electronic dictionaries, encyclopedias) to locate, sort and interpret information on an assigned topic.
- Students perform simple queries on existing databases and report results on an assigned topic.
- Students identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource.

Technology Outcomes for Fourth Grade

Basic Operations and Concepts

- Students discuss ways technology has changed life at school and at home.
- Students discuss ways technology has changed business and government over the years.
- Students recognize and discuss the need for security applications (e.g., virus detection, spam defense, popup blockers, firewalls) to help protect information and to keep the system functioning properly.
- Students manage and maintain files on a hard drive or the network.
- Students demonstrate proper care in the use of hardware, software, peripherals, and storage media.
- 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.
- Students identify search strategies for locating needed information on the internet.
- Students proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups.

Social, ethical, and human issues

- Students identify cultural and societal issues relating to technology.
- Students discuss how information and communication technology supports collaboration, productivity, and lifelong learning.
- Students discuss how various assistive technologies can benefit individuals with disabilities.
- Students discuss scenarios describing acceptable and unacceptable uses of technology (e.g., computers, digital cameras, cell-phones, PDAs, wireless connectivity) and describe the consequences of inappropriate use.
- Students discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, plagiarism) and related laws.
- Students use age-appropriate citing of sources for electronic reports.
- Students identify safety precautions that should be taken while on-line.
- Students explore various technology resources that could assist them in pursuing personal goals.

Technology Productivity Tools

- Students know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker).
- Students know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents.

- Students use a variety of technology tools and applications to promote [their] creativity.
- Students understand that existing (and future) technologies are the result of human creativity.
- Students collaborate with classmates using a variety of technology tools to plan, organize, and create a group project.

Technology Communication Tools

- Students use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences.
- Students identify how different forms of media and formats may be used to share similar information, depending on the intended audience, (e.g., presentations for classmates, newsletters for parents).

Technology Research Tools

- Students use Web search engines and built-in search functions of various resources to locate information.
- Students describe basic guidelines for determining the validity of information accessed from various sources (e.g. web site, dictionary, on-line newspaper, CD-ROM).
- Students know how to independently use existing databases (e.g. library catalogs, electronic dictionaries, encyclopedias) to locate, sort and interpret information on an assigned topic.
- Students perform simple queries on existing databases and report results on an assigned topic.
- Students identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource

Technology Outcomes for Fifth Grade

Basic Operations and Concepts

- Students discuss ways technology has changed business and government over the years.
- Students recognize and discuss the need for security applications (e.g., virus detection, spam defense, popup blockers, firewalls) to help protect information and to keep the system functioning properly.
- Students know how to use basic input/output devices and other peripherals (e.g., scanners, digital cameras, video projectors).
- Students know proper keyboarding positions and touch-typing techniques.
- Students manage and maintain files on a hard drive or the network.
- Students demonstrate proper care in the use of hardware, software, peripherals, and storage media.
- Students know how to exchange files with other students using technology (e.g., e-mail attachments, network file sharing, diskettes, flash drives).

- 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.
- Students identify search strategies for locating needed information on the internet.
- Students proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups.

Social, ethical, and human issues

- Students identify cultural and societal issues relating to technology.
- Students discuss how information and communication technology supports collaboration, productivity, and lifelong learning.
- Students discuss how various assistive technologies can benefit individuals with disabilities.
- Students discuss the accuracy, relevance, appropriateness, and bias of electronic information sources.
- Students discuss scenarios describing acceptable and unacceptable uses of technology (e.g., computers, digital cameras, cell-phones, PDAs, wireless connectivity) and describe the consequences of inappropriate use.
- Students discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, plagiarism) and related laws
- Students use age-appropriate citing of sources for electronic reports.
- Students identify appropriate kinds of information that should be shared in public chat rooms.
- Students identify safety precautions that should be taken while on-line.
- Students explore various technology resources that could assist them in pursuing personal goals.
- 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 know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker).
- Students know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents.
- Students use a variety of technology tools and applications to promote [their] creativity.
- Students understand that existing (and future) technologies are the result of human creativity.
- Students collaborate with classmates using a variety of technology tools to plan, organize, and create a group project.

Technology Communication Tools

- Students use basic telecommunication tools (e.g., e-mail, Web Quests, IM, blogs, chat rooms, web conferencing) for collaborative projects with other students.
- Students use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences
- Students identify how different forms of media and formats may be used to share similar information, depending on the intended audience, (e.g., presentations for classmates, newsletters for parents).

Technology Research Tools

- Students use Web search engines and built-in search functions of various resources to locate information.
- Students describe basic guidelines for determining the validity of information accessed from various sources (e.g. web site, dictionary, on-line newspaper, CD-ROM).
- Students know how to independently use existing databases (e.g. library catalogs, electronic dictionaries, encyclopedias) to locate, sort and interpret information on an assigned topic.
- Students perform simple queries on existing databases and report results on an assigned topic.
- Students identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource.
- 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 to access information that can assist [them] in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase).
- Students use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community)

WMS Technology Curriculum Alignment

Basic Operations and Concepts

1. Use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer.

Students will demonstrate proper keyboarding technique through teacher observation. Currently Mavis Beacon 9.0 is used to assess speed and accuracy. Students should be typing at a minimum rate of 15 AWPM by the end of the 1st marking period of Grade 6. (gr.6)

2. Use Appropriate Technology terminology.

Daily references to toolbars, icons, windows, etc. Reinforcement occurs with each activity regardless of the program being used. (gr.6)

This expectation is reinforced throughout each new project and assignment by pre-reading and explaining the terminology. The Assignments include activities throughout the MS Office Suite, with an Internet Web quest, and researching internet history. (gr 7)

Daily terminology work in MS Word. There is an assessment at the end of each 4 week segment. (gr 8)

3. Use a variety of technology tools to maximize the accuracy of technology-produced products.

Introduction of the spell/grammar check and encouraging it's use with all assignments/projects. (gr 6)

The MS Office Suite is used to further students understanding of word processing, spreadsheets, slideshows and publication creation. Students will be assessed using a variety of integrated assignments with other core classes. (gr 7)

- The Owl Pellet dissection assignment uses students formula writing skills from mathematics and graphing skills
- The School Spreadsheet Assignment uses students formatting and formula writing skills
- The Beach Clean-up spreadsheet also furthers the use of graphing in spreadsheet
- Students write persuasive essays, myths, and personal letters using word processing formatting skills and language arts skills
- Students use word processing to compose at the keyboard with daily prompts that are assessed in both technology and language arts classes
- Students use internet searching skills in all core areas and encore areas. Lessons in appropriate search techniques are taught with Mrs. Oyler in the library as well as throughout a unit on Cyber safety.

- Students will use digital photos from the school forest, the school beach and fun activities to create a slideshow presentation of these events
- Students will use digital video clips to create a short video presentation using Windows Movie Maker.

All MS programs utilize automated features on a daily basis. (gr.8)

4. Understand that new technology tools can be developed to do what could not be done without the use of technology.

Demonstrations show how word processing programs can make corrections and editing to documents much easier and more efficient. (gr.6)

Students will create the projects from #3 by hand in other core areas and then do them using technology to understand the benefit of the technology. In addition, films describing the evolution of technology are used to depict the benefits of technology. (gr.7)

Students graph data by hand on graphing paper in another classroom, then graph the same data with MS Excel in technology class. (gr.8)

5. Describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use.

Students are shown ways to “fix” common problems themselves, usually as simple as restarting the computer checking the wall plug, or plugging components into different USB ports. (gr.6,7)

Students are shown how to check the status of internet connections and how to repair them. They also check port plugs for connection status. (gr.8)

6. Identify changes in hardware and software systems over time and discuss how these changes affected various groups

Students discuss the Generations of Computers and create poster projects about these generations. (gr.6)

Students start the year by performing a Web quest, which discusses changes in technology over time. Students are also shown various technology related films which also address this issue.

Software issues are discussed in class as many students have differing versions than the school. Techniques to successfully send items to the school through their email are discussed. (gr.7)

Students get reinforcement of the history of technology through discussions and films. (gr.8)

7. Discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving.

The basics are demonstrated on how to restart, check plugs, check connections, etc to solve common technology problems. Students are also made aware that many problem-solving techniques are limited at school due to security/safety software installed on the network. (gr.6)

Students are shown through demonstration how to successfully restart their computer system, which solves many common problems. The help feature is also shown through demonstration to help students become independent in troubleshooting software issues. Many software problems are "glitches" in the actual programming, which also indicates a system may need to be upgraded. (gr.7)

8. Identify characteristics that suggest that the computer system hardware or software might need to be upgraded.

There is a classroom discussion about the computer "freezing up": for example: not enough memory and slow speed are very common occurrences. These may indicate that a system needs upgrading. (gr. 6,7,8)

9. Identify a variety of information storage devices and provide a rationale for using a certain device for a specific purpose.

Students learn to identify what each device is and are shown examples of these devices. Networked storage is then demonstrated and used throughout the year. (gr.6)

Students are shown several storage devices such as CD's, DVD's, floppy discs, and USB flash drives with a discussion of their purposes. They are then shown how to save in their own network folder and how to organize this space efficiently. In addition, methods for sending items through their gagle email account are discussed. (gr.7)

Online storage devices are discussed and utilized through Google docs or open office, for example. (gr.8)

10. Identify technology resources that assist with various consumer-related activities (e.g., budgets, purchases, banking transactions, product descriptions)

MS Excel is used for a product-pricing activity in which students use the internet to research products and their costs. Basic Excel functions are utilized. (gr.6)

Students answer writing prompts daily, many of which involve researching consumer items. (gr.7)

MS Excel is used for an income-expense project (budget) associated with a projected career. In addition, a stock market project through Google Spreadsheets is assessed. (gr.8)

11. Identify appropriate file formats for a variety of applications.

Awareness that each program in MS Office has a different file extension. (gr.6)

A short in-class discussion of differences in file formats as well as web address extensions is done during the first month of classes. (gr.7)

Daily board work discusses file extensions and their uses. (gr.8)

12. Use basic utility programs or built-in application functions to convert file formats.

Discussion of free file-conversion downloads to change unusable files to usable files. (gr.8)

13. Proofread and edit writing using appropriate resources and grade level appropriate checklists both individually and in groups

Throughout the MS Office Suite, students are encouraged to preview their work both with spelling and grammar checks, as well as for formatting issues through print preview. In addition to the Technology room, students are encouraged to proofread and edit, both individually and with peers, in all subject areas. (gr.6,7,8)

Social, Ethical, and Human Issues

1. Understand the potential risks and dangers associated with on-line communications

Safety issues with making personal information available is discussed. Internet Safety and Email Netiquette are researched and then summarized in written form. (gr.6)

Students work through a unit on Cyber safety which discusses dangers with technology usage. Much of this is group work and role-playing. In addition, a sample “chat” is given to students for discussion to demonstrate how innocent communication can be dangerous. (gr.7)

Internet dangers are discussed in class as a group and students create an internet-danger PowerPoint demonstration to present to the class. (gr.8)

A featured presenter from the Michigan State Police demonstrated potential dangers to the entire student body. (gr. 6,7,8)

2. Identify security issues related to e-commerce.

A classroom discussion of identity-theft illustrates a common security issue. (gr.6)

SPAM lists are discussed, and how an email can be added to them. (gr.7)

Identity-theft is discussed and the use of secure sites is demonstrated. (gr.8)

3. Discuss issues related to acceptable and responsible use of technology.

Students are given situations and ponder possible ramifications. Plagiarism is most commonly discussed when composing assignments for other core classes. Music download sites are also discussed. (gr.6,7)

Copyright issues are discussed in class. Personal stories are shared by the instructor. Viruses are shown to students and methods for repair and preventions are demonstrated. (gr.8)

4. Describe possible consequences and costs related to unethical use of information and communication technologies.

Unethical music downloads are discussed by referencing local college-students who were fined and warned by authorities. The Universities disciplined these students. (gr.6,8)

5. Discuss the societal impact of technology in the future.

While discussing future careers, students are shown how jobs can be acquired or applied for online. Future job projections are also available. (gr.7,8)

6. Provide accurate citation when referencing information from outside sources in electronic reports.

Discussion of "plagiarism" and how students need to be aware that if they take information, they need to give credit for it. (gr.6)

During projects involving other core classes, students are taught the correct citation methods and are directed to an internet tool (citationmachine.com) which helps them format these items correctly. (gr.7)

7. Use technology to identify and explore various occupations or careers.

Using a site called Career Cruising, students take an interest survey and then explore careers associated with those interests. These are then saved for future use through their EDP, which is updated at least annually (gr.7,8)

8. Discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning.

In addition to Career Cruising, students are encouraged to research anything of personal interest online, within the schools' guidelines. (gr. 6,7,8)

9. Identify uses of technology to support communication with peers, family, or school personnel.

Students are given access to Gaggle, which is a filtered email system safe for school use. This is one of many tools they use daily for communication. In addition, discussion of other online tools happen often throughout the school year, such as: MySpace, Facebook, Bebo, or other social networking sites currently used by many students. Also, Skyward Family Access is provided for home-to-school communication. (gr.6,7,8)

Technology Productivity Tools

1. Apply common software features to enhance communication and to support creativity.

Students use formatting tools in all MS Office Suite products. Without requiring specifics, students are required to format items according to their own personal tastes. Assessment is the formatting part of their projects. (gr. 6,7,8)

2. Use a variety of technology resources, including the internet, to increase learning and productivity.

Students complete in-class search projects using a variety of student-based websites such as FactMonster.com, kidsclick.com, yahoooligans.com, and others. In addition, they complete research projects for Science, Social Studies and Language Arts which are assessed for content and formatting in the associated subject areas. (gr.6,7)

Each project includes an internet research component. (gr.8)

3. Explore basic applications that promote creativity.

Students create Famous Scientist poster in MS Word, create a technology-newspaper and personal calendars in MS Publisher, create a personal slideshow presentation and a country project in MS PowerPoint. Many of these are incorporated into other core classes. (gr.6)

Students use the Office Suite to create slideshows of their own design, they create a Magazine about Famous People which are researched throughout the year, they create comic strips using the drawing toolbar and picture tool, as well as creating spreadsheets with charts and graphs designed according to their own desire. (gr .7)

Students use MS Publisher to create placemats for local restaurants, advertisements for the local newspaper and family calendars. T-shirts and mouse pads are also created using Publisher in conjunction with a heat press. (gr.8)

4. Use available utilities for editing pictures, images, or charts.

MS Office has utilities for cropping and resizing any image or picture that is inserted. (gr.6)

Students spend a very short time using MS Paint to create a design. In addition, they use the drawing toolbar in all MS Office products to create and edit existing designs, or custom-made designs. (gr.7)

Students use a free photo-editing software (lunapic.com) to crop, resize and edit photographs of their own choosing. (gr.8)

5. Use collaborative tools to design, develop, and enhance materials, publications, or presentations.

Using a team or partnered approach, students work together using the Office Suite to complete written projects for all subject areas. These are then assessed in technology class, as well as in the class(es) the project was assigned. The internet is one basic research tool, partnered with other materials in classes. (gr. 6,7)

Students use partners to write a single paper through the use of Google docs. (gr.8)

Technology Communications Tools

1. Use a variety of telecommunication tools or other online resources to collaborate interactively with peers, experts, and other audiences.

Students have daily access to Gaggles student email, a filtered email tool provided by the district. Through this medium, students can send each other electronic data, or students can send things to school from their homes. (gr. 6,7,8)

Through the use of Google docs is being incorporated to promote interaction. Blogs and podcasts can only be utilized when our network permits it. (gr.8)

2. Create a project using a variety of media and formats to present content information to an audience.

The MS Office Suite is used to create documents, slideshows, and publications that are assessed in technology class and in the other class(es) the project was assigned. Google docs is also used as our network permits. (gr. 6,7,8)

Technology Research Tools

1. Use a variety of Web Search engines to locate information

During the first semester, students are given a multitude of student websites to explore and rate. During technology class, students then share their findings to the rest of the class regarding that specific site. In addition, posters are created about these sites and then posted around the room for the remainder of the year to remind students of areas to locate information. (gr.7)

2. Evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness.

Students spend a day evaluating websites. This is a participation based exercise, and results are shared with the class. The tool used is Kathy Schrock's worksheet. (gr.7)

Students do a project from a "fake" website to answer questions from a worksheet. It's misleading information used to demonstrate the importance of using a variety of sources. (gr.8)

3. Identify types of internet sites based on their domain names.

This skill is incorporated into the 3-day presentation done in the library. (gr.6)

A listing of site extensions are given to each student with an explanation of the type of document being used. These are useful when looking through a list of "hits" on a search engine so that students know the type of source being used. (gr.7)

A brief class-discussion is done to reinforce this idea. A poster is placed on the classroom wall as a reminder. (gr.8)

4. Know how to create and populate a database.

A mail-merge activity is used to demonstrate one type of possible database example. MS Word is used for this activity. (gr.7)

Students create an address book, which shows address and phone numbers when queried. The cell-phone address book is also a database. (gr.8)

5. Perform queries on existing databases.

The Library does a 3-day presentation on searching using their website databases. (gr.6)

Other than in-class searching on the internet, Mrs. Oyler from the library does a one-day activity with the kids on the school's library website. She shows them the different

databases available from the links, how to use them, and what types of information they provide. (gr.7)

6. Know how to create and modify a simple database report.

The phonebook project allows students to modify each report so that it displays the wanted information. (gr.8)

7. Evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task.

Classroom discussion of the emergence of new tech toys lends itself to the discussion of what toy is used for what purpose. (gr.8)

Technology Problem-Solving and Decision-Making Tools

1. Use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem.

Using the information from the School Forest Spreadsheet, students apply that information in Science classes to the School Forest Management Plan. (gr.7)

Students use graphs to decide what stocks they might buy in the stock market project. (gr.8)

2. Describe the information and communication technology tools to use for collecting information from different sources, analyze findings, and draw conclusions for addressing real-world problems.

The internet is used primarily, however students can also use email, telephone, television, IM's and blogging to gather information, about problems, for analysis and conclusions. (gr. 6,7,8)

Students determine how to build a structurally sound bridge, the fastest car, or the most aesthetic floor-plan for a home. (gr.8)

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High School Computer/Technology Course Objectives

General

At the high school level, it is anticipated that computers and other technologies will be infused throughout the curriculum. It will be necessary to identify how computers and technology will support all areas of the curriculum. This should be done with input from the various departments.

In addition to this, there will be a specific computer/technology curriculum which will be taught through several “computer-intensive” courses. These courses are described here.

Presently, the graduation requirements call for one semester of “computers” for every student along with a "virtual learning" requirement. We recommend that the course students choose is Computer Technologies to fulfill these graduation requirements. We also highly recommend that the students choose at least one more semester course from the “computer-intensive” electives. Some courses may be taken as electives or may be required for certain other courses of study.

Distance Learning opportunities are also available for students via several of our foreign language classes. The classes are held in our Distance Learning classroom that utilizes Polycom conferencing equipment.

9-12

Distance Learning

The State Board of Education has recommended that all students take an online course or have an online learning experience before graduation. Students must understand that to be successful in an online course, you should:

- be self-motivated and self-disciplined
- be committed to the course—online courses are at least as time-consuming as face-to-face courses
- take responsibility for your own learning and plan to be a self-directed learner
- expect to log on daily for updates, messages, and communication among participants
- anticipate being at the computer for extended amounts of time
- speak up immediately if you are having technical difficulties or are having problems understanding
- be ready to participate in online classroom discussions
- be able to read and follow written directions—at this time, reading is a critical skill in online learning
- be comfortable and competent with instructional technologies, using computers, the Internet, e-mail, office applications, and other applications appropriate to the learning situation
- possess the skills and knowledge needed to locate, differentiate, and evaluate various sources of information, and why, when, and how to use them

Computer-Intensive Courses

Computer Technologies

9, 10, 11, 12

Prerequisite: None

In this one semester course, students learn basic through advanced computer concepts with an emphasis on both the personal computer and advancements in technology. Topics include hardware, application software and operating systems, the Internet and World Wide Web, communications, e-commerce, societal issues, database management, systems analysis and design, programming, information systems, ethics, career opportunities, system security, and computer trends. The class also covers video editing, digital media (mp3s, pod casts, etc.), 3d animation, GPS, and Geographic Information Systems. This class will prepare the student for living in a world surrounded by and immersed in technology.

Course Goals

Students will understand the important considerations in purchasing computers, computer peripherals, and computer software.

Students will become familiar with current technologies.

Students will create projects using current technologies.

Students will present projects to class.

Students will learn the basic concepts of computer programming.

Students will produce computer programs using proper programming techniques.

Software Design

9, 10, 11, 12

Prerequisite: Computer Technologies or Department Approval

Software Design is a one-semester course focused on writing computer software. The development of algorithms and good programming methodology will be learned through creating basic computer applications to game design. The goal of this course is to enable students to develop methods using the power of the computer to solve problems. Students will become familiar with programming methods such as top down design and object-oriented programming. They will learn to apply programming methods to writing program code and will become familiar with the structure and operation of Visual Basic.

Course Goals

Students will be able to develop algorithms to solve problems.

Students will become familiar with programming methods such as top down design and procedure-orientated programming.

Students will be able to apply programming methods to writing program code.

Students will become familiar with the structure and operation of the compiler used with the chosen programming language.

Students will learn to write clear, well documented programs.

Advanced Software Design

9, 10, 11, 12

Prerequisite: Software Design

Advanced Software Design is a one semester continuation of the study of programming begun in Software Design. The general course goals will continue to be addressed through the study of advanced programming topics. Students will develop algorithms to solve problems and will become increasingly familiar with programming methods such as top down design and procedure-oriented programming. They will apply programming methods to writing program codes and will become familiar with the structure and operation of the compiler used with Java. Some of the major topics covered in this course include: further works with structures from Software Design, procedures, scope of variables, arrays, sorting and searching routines, manipulation of data structures, string processing, working with files, graphics and advanced programming applications, Java applications and applets.

Course Goals

Students will be able to develop algorithms to solve problems.

Students will become proficient with programming methods such as top down design and procedure-orientated programming.

Students will be able to apply programming methods to writing program code.

Students will become proficient with the structure and operation of the compiler used with the chosen programming language.

Students will learn to write clear, well documented programs.

Web Design

9, 10, 11, 12

Prerequisite: Computer Technologies or Department Approval

This one semester course is designed to teach students to understand the concepts of and to develop the skills needing in creating and producing web pages. These skills will be applied to the production and upkeep of internet pages. Course goals include designing/producing web pages; creating sites; integrating web managers and managing/updating web pages and sites. Topics covered will include page design on the internet; text, graphic and video integration; button design/use; page links; home page design; multiple pages connections; page design and layout; applications and management of internet sites.

Course Goals

Students Will Design web pages.

Students will produce web pages.

Students will create sites integrating web pages.

Students will manage and update web pages and sites.

Media Production

9, 10, 11, 12

One Year Course (One Semester with permission from instructor). This course allows students to further explore and enhance their skills in multimedia production. Students will write, direct and produce various video products for things like schools events, lessons produced by teachers, guest speakers and so on. Students will also help produce podcasts for the district and post them to the web along with creating other multimedia projects. Some of the topics covered include: information gathering, computer based video editing, videography, podcasting, audio editing, audio production, internet publishing, interpersonal communications, and information presentation.

Course Goals

Students will gather information.

Students will operate video equipment.

Students will produce a weekly news/information program.

Students will direct a news program.

Students will present news.

Students will publish media to the web.

Desktop Publishing

9, 10, 11, 12

In this class, you will have an opportunity to acquire graphic design expertise using Adobe Photoshop. Desktop Publishing is a one-semester course involving the creation and the design of high quality documents that contain text, graphics and unique colors. The goal of this course is to enable students to create professional looking documents while meeting deadlines.

Course Goals

Students will design documents to look professional.

Students will create documents using advanced techniques.

Students will import images from digital devices.

Students will design presentations.

Students will create presentations.

Major Topics Covered

- Importing, creating, and using text
- Applying basic design concepts
- Working with graphic elements
- Using scanners, clip art, and digital cameras
- Applying advanced text techniques
- Using tabular data formatting
- Designing and creating documents
- Planning presentations
- Using software to create multimedia presentations
- Using text, clip art, digital images, video clips, and sound clips in presentations

Pre-Engineering

9, 10, 11, 12

This course introduces the student to the fundamental elements of Engineering. The focus is on how to use CAD/CAM/NC for the purpose of designing and manufacturing parts on actual CNC machines. The other areas explored in Computer Integrated Manufacturing (CIM) are Robotics, Programmable Controllers, Electronics, Soldering and Fluid Power. All areas give the students the opportunity to work on actual machines and equipment while learning is taking place.

Technical Drawing

9, 10, 11, 12

This one-semester course in basic drafting techniques is designed to give the students an exploratory experience in drafting and design. Concepts covered are: multi-view drawing, dimensioning techniques, geometric construction, sectional views and pictorial drawing. Students will produce drawings with traditional drafting techniques and the use of the Computer-Aided-Design (CAD) system

Mechanical Drawing

10, 11, 12

Prerequisite: Technical Drawing

Mechanical Drawing is a yearlong course in basic and advanced drafting procedures. The problems designed provide a review of basic drafting and an in-depth study of specific drafting techniques. Exploratory problems in the more advanced drafting techniques are designed to provide a challenge and guide for the student toward an engineering or technical career.

Concepts covered include Computer-Aided-Design techniques, orthographic projection, detail and assembly drawings, sectional views, screw thread representation, auxiliary views, welding symbols and pattern development. Students will be using the Computer-Aided-Design (CAD) system to create their drawings.

Computer Assisted Drafting - C.A.D.

11, 12

Prerequisite: Mechanical Drawing

The C.A.D. class will provide the students with an in-depth study of Computer-Aided-design. The course presents logical step-by-step instruction. Students will work on 2D drawings, solid modeling and introductory civil engineering projects using design software. As the student progresses, individualized instruction will enhance the CAD experience.

Architectural Drawing

9, 10, 11, 12

This semester course in residential architecture is designed to familiarize the student with house design, construction and building materials. Students will produce floor plans, elevations, sectional views, 3D exterior/interior and plot plans.

Students will be using the Chief Architect CAD system to create their drawings.

Adult Literacy

At this time there is no funding available for a formal Adult Literacy program. Classes are offered occasionally in Technology Literacy for all community members. These classes are hosted by the library through grant funding.

Professional Development

Staff In-service/Training

A necessity for the successful implementation and continued growth of technology in the district is to provide for support in computer usage, and staff in-servicing. Our plan should account for the problems posed by the full load with which staff members already must deal. The plan should also provide incentives for participation in training or in-service sessions.

Professional Development Training sessions will be held at least twice during the school year, developed by the district technology coordinator, and will follow the standards set forth in NETS for Teachers

The following components of a Staff in-service/training plan are recommended:

- 1) Individual Assistance
 - a. One of the duties of the District Computer Coordinator should be to assist teachers individually in the use of the computer in their classroom. This could also involve setting up a program for student assistants from the high school to work with classes.
- 2) In-service Sessions
 - a. In some years, it may be possible to schedule one or two sessions during the work day. This would involve early dismissal of students. Such session could focus on specific topics, e.g. particular software packages, classroom management, topics like telecommunications, etc.
- 3) Computer Loan
 - a. The district computers are available for free loan to teachers during the summer months. This allows them time to become familiar with the operation of the equipment and would make use of equipment that would otherwise sit idle, which is not desirable.
- 4) Conferences/Workshops
 - a. Teachers from the district should have the possibility of attending conferences or workshops related to the use of computers in the classroom. This could be accomplished through budgeted district funds as well as through funds from other sources. Possibly, the teachers who would attend such conferences could in turn share the information with others through some of the sessions mentioned earlier.
- 5) Short Courses

- a. These are courses of approximately 9-12 hours duration. They would probably be held during the evenings (or weekends). The courses should be offered free of charge to staff members and should carry some incentive, for example a stipend or perhaps credit for movement in the salary schedule or towards longevity.
- 6) Summer Workshop
- a. This could be a one- or two- week workshop offered during the summer months. It should offer similar incentives as those listed above. Possibly such a course could be coordinated with other districts in the area.
- 7) College Courses
- a. Teachers are encouraged to attend courses that are offered by colleges and universities. There are a number of opportunities for learning new technologies and how to implement them into the curriculum through the higher education system.

Technical Support

The district has created and staffed a full time Network/Information Administrator position. This position is responsible for ensuring that the district network is operating at its designed specifications. This person is also responsible for the coordination of all computer services. Maintaining the voice and video networks will also be the responsibility of the Network Administrator. This person will be central to the purchase decisions made by the district.

The district has also staffed a System Administrator position. The responsibilities of this position will include the repair and maintenance of the district copiers and printers. The Technician will also aid the Network Administrator in the daily maintenance of district technology. In addition this person will work hand in hand with the Network Administrator and the Technology Coordinator to derive district policies, purchases and evaluations.

As is needed the district will employ student technicians as well. These will be students with an interest in technology. They will be responsible for routine maintenance of district technology.

The district maintains software support/maintenance contracts with the vendors for the major components. These contracts allow for the timely resolution of any problems that may arise related to the software. The district purchased network file servers which are supported by local authorized service centers. These authorized service centers are generally able to resolve any hardware problems within 24 hours.

The district provides basic technology training classes throughout the school year and during the summer for the district staff. These classes will help prepare teachers not yet comfortable using the district technology in a relaxed, non-threatening environment. The classes are also taught on machines the staff will be using and on the system they will have access to. This allows the staff to become accustomed to the district's network, hardware, and software. Some of the areas that may be covered are; access to the Internet, email, file storage, server access, and networked printer access. These classes are also beneficial to newly hired staff members for introduction to the districts technology. Similar classes are also held during scheduled in-services throughout the school year. Limited one-on-one training is provided to assist in resolving specific problems related to the use of the district's technology.

The district has a Technology Coordinator on staff as well. This person aids the Network Administrator in maintaining and upgrading the system components. The two work together on district policy regarding technology use, purchase of hardware, evaluation and purchase of software, and training. It is also a goal of the district to hire a full time staff member to act as a technology resource person in the classroom. This person would be available to teach cooperatively with a regular classroom teacher to integrate technology into the curriculum.

Along with the staff specifically responsible for maintaining the district technology, many staff members also provide their services. In each building a group of staff members that are more proficient in the use of technology serve as resources for other staff members. It is through these peer leaders that much of the hands on training takes place.

Computer Hardware and Software Acquisition

It is the goal of the CLK District to create, maintain, and enhance a cohesive and extensive computer network. The network should service the entire school district. It is the purpose of the network to increase available resources while reducing purchase and maintenance costs. To achieve this goal most expenditures on hardware and software should be completely compatible with the network.

The rapid advance of technology continues to out pace the ability of any district to “keep pace” with the most cutting edge computers on a district wide basis. It is however possible to create and incorporate computers that can work together. As new computers are purchased a main consideration must be the compatibility with the network. Using the server farm that the district operates, most computer platforms will be able to access and utilize the resources the network provides. This must remain in the forefront of hardware purchasing decisions.

As the hardware continues at a break neck pace so the software is changing with the same ferocious speed. Once again the district’s goals need to be the driving force for software purchases. Whenever possible software should be purchased that can be installed on the network and shared among multiple users. Most importantly the software must also meet the goals of the curriculum. These two factors must be evaluated along with the software’s operation.

Purchases of hardware and software should be evaluated by the staff person who is making the request and the Network/Information Administrator for compatibility before any purchases are made. The district will make available for staff, evaluation tools.

Grant Incorporation

The Public Schools of Calumet, Laurium, and Keweenaw has in the past and will in the future actively seek out and apply for grants that will further the goals of the district. This includes the acquisition of computer and other technologies as prescribed in the district's technology plan.

The CLK Schools will continue to apply for USF funding. This funding is primarily intended to increase access to the Internet. The district will utilize these funds to maintain the current connectivity as well as expand the capabilities of the system.

Currently the Calumet-Laurium-Keweenaw school district is involved with the Copper Country Intermediate School District serving as a cooperative in the application for grants. The grants that are awarded are implemented by the CCISD in conjunction with the entire cooperative.

It is the intention of the CLK Schools to apply for a grant through the Technology Literacy Challenge Fund. It is our goal to use this money to propel our technology into the forefront of public education.

Public Utilization of Technology

Currently the district supports the technology in the Calumet Public Library, which is also the school library. The computers available in the library are available for public use during regular library hours, (an average of 44 hours a week), offering access to nearly 50 different educational CD-ROMS, basic word processing, database, spreadsheet packages, on-line research databases, and encyclopedias, and the Internet.

With an automated circulation and cataloging system shared with a consortium of libraries throughout the Upper Peninsula of Michigan, the public can access the library collection at the library or at home through the WWW. They can place holds on material and look at the collections of other libraries. Future plans include the ability for the public to place interlibrary loan requests directly to cooperating libraries in the Upper Peninsula.

Children and their parents are encouraged to use the computers in the Children's Area to explore computers and learning together by using primary software and 14 different child oriented CD-ROMS.

The Closed Circuit Television System in the library enables color magnification of anything that set on the viewing stage. This allows users with low vision to see such things as personal letters, newspapers, prescriptions, and other small things independently, without asking for someone to see or read for them.

The Kurtzweil Reader reads printed text aloud, in a variety of computer synthesized voices. Visual impaired library users can listen to printed materials that are not available in any recorded format. Students can utilize the Reader to listen to a book while they read along with it in print.

Telefax equipment offers fee-based faxing capability to the public.

The Community Health Resources workstation, connected directly to the University of Michigan Comprehensive Cancer Center Health Media Research Laboratory, provides a very user friendly, point and click source of information on a variety of health topics.

One of the district goals is to have open computer lab hours in the evening to provide additional public access to computers and computer resources.

Evaluation

The CLK School District is constantly evaluating the performance of the technology and the staff's use of that technology. The main focus of our evaluation should be how well the technology is being integrated into the existing curriculum and how effective the technology is in enhancing that curriculum. The technology should not be used for the sake of the technology. Instead, the technology should be a tool to increase the learning of the students and efficiency of the staff.

Much of the feedback comes from surveying of the staff. Surveys will be conducted at least once a year using an online survey tool. The District Computer/Technology Coordinator, Network/Information Administrator and other technology support staff will be consulted as to the technology usage that they encounter in their daily duties.

The district maintains several technology committees to evaluate, recommend, and set goals for technological advances for the district. The goals for each year serve as a checklist for the progress being made. As each goal is met its effectiveness is evaluated. New goals are developed with the district's long range goals in mind.

The administration will also be responsible for evaluating staff on their use of technology in accordance with regular evaluations as per the professional agreement between the district and the staff.

Computer Integration Survey Example

Name:

Building

Elementary

Grade: K 1 2 3 4 5

Washington

Grade: 6 7 8

High School

Dept: Language Technology Computers Math Social Studies Science Other

How often do you use a computer?

Do not use
multiple times a week
multiple times a day

How often do your students use a computing device (computer, iPad,...)?

Do not use
multiple times a week
multiple times a day

How often do you use the multimedia projector in your classroom?

Do not use
multiple times a month
multiple times a week
multiple times a day

How comfortable are you with using a computing device as a tool in your classroom?

Not comfortable
Somewhat comfortable
Very comfortable

If you use the Internet at school please rate the speed and reliability.

Great
OK
Poor

Rate the reliability, access speed and available space of your personal folder.

Great
OK
Poor

If you are required to use a computer as part of your duties, rate the computer's ability to reliably and efficiently perform the tasks necessary to fulfill those duties.

Great
OK
Poor

Rate your computer skills.

Beginner
Intermediate
Advanced

How do you see the need for teacher training in computer education?

Somewhat needed
Needed
Very needed

The Public Schools of Calumet, Laurium, and Keweenaw Technology Policy Overview

—

IMPORTANT

The Public Schools of Calumet, Laurium and Keweenaw promotes the use of its many advanced technologies for the betterment of its students, faculty, staff, and community. The District views the use of these technologies as tools in the pursuit of educational betterment.

The policy governing the use of these tools, as set forth by the Board of Education on April 7, 1998, will be following their review and approval, made available in the following locations:

Hard copy versions:

- The CLK Public/School Library Circulation Desk
- The district's administrative offices during regular business hours.

Electronic versions:

On the World Wide Web at: <http://www.clkschools.org/technology/acceptable-use-policy/>

By email request to: policy@clkschools.org

Please use the subject "Technology Policy Request" and in the body state the address to send the policy to.

In order to use the district's technologies you must have read and agree to the aforementioned policy.

In order to use the district's technologies you must have read and agree to the aforementioned policy.

NETWORK AND INTERNET ACCESS AGREEMENT FOR STUDENTS

AGREEMENT

This agreement is entered into this _____ day of _____, 20 _____ between _____, hereinafter referred to as Student, and the Public Schools of Calumet, Laurium and Keweenaw, hereinafter referred to as District. The purpose of this agreement is to provide Network; Electronic Mail, Internet access, File Sharing, Program Sharing, and Information Access, hereinafter referred to as Network, for educational purposes to the student. As such, this access will (1) assist in the collaboration and exchange of information, (2) facilitate personal growth in the use of technology, and (3) enhance information gathering and communication skills.

The intent of this contract is to ensure that students will comply with all Network and Internet acceptable use policies approved by the District.

In consideration for the privileges of using the District and/or Network resources, and in consideration for having access to information contained on the Network, or by the Network, I hereby release the District, Network and their operators and administration from any and all claims of any nature arising from my use, or inability to use the District and/or Network resources.

I agree to abide by such rules and regulations of system usage as established by the District and/or Network Policy. These rules will be available in hardcopy form in the District Office and the CLK Library.

(Sign and return to the District Network Administrator)

Signature of Student

Date

As the Student's parent or legal guardian, I agree to this agreement and will indemnify the District for any fees, expenses, or damages incurred as a result of my child's use or misuse of the Network or equipment.

Signature of Parent

Date

Please fill in the following information for your account:

Password (6 to 8 Characters) = _____

Graduation Year = _____

Appendix to Agreement 7540 F1

In compliance with CIPA the District has installed a filtering device that blocks visual depictions of material that is obscene, pornographic, or harmful to minors.

In exchange for the use of the Network resources either at school or away from school, I understand and agree to the following:

The use of the Network is a privilege which may be revoked at any time and for any reason. Appropriate reasons for revoking privileges include, but are not limited to, the altering of system software, the placing of unauthorized information, computer viruses or harmful programs on or through the computer system in either public or private files or messages. The District reserves the right to remove files, limit or deny access, and refer the student for other disciplinary actions, or if the infraction is criminal refer the case to law enforcement authorities for criminal and/or civil prosecution.

The District reserves the rights to any material stored in files which are generally accessible to others and will remove any material which the District, at its sole discretion, believe may be unlawful, obscene, pornographic, abusive, or otherwise objectionable. Students will not use their District-approved computer account/access to obtain, view, download, or otherwise gain access to such materials.

All information services and features contained on District or Network resources are intended for the private use of its registered users and any use of these resources for commercial-for-profit or other unauthorized purposes (i.e. advertisements, political lobbying), in any form, is expressly forbidden.

All property rights to a work product using District technology are assigned to the district.

The District and/or Network resources are intended for the exclusive use by their registered users. The Student is responsible for the use of his/her account/password and/or access privilege. Any problems which arise from the use of a Student's account are the responsibility of the account holder. Use of an account by someone other than the registered account holder is forbidden and may be grounds for loss of access privileges.

Any misuse of the account will result in suspension of the account privileges and/or other disciplinary action determined by the District. Misuse shall include, but not be limited to:

intentionally seeking information on, obtaining copies of, or modifying files, other data, or passwords belonging to others
misrepresenting other users on the Network
disrupting the operation of the Network through abuse of hardware or software
malicious use of the Network through hate mail, harassment, profanity, vulgar statements, or discriminatory remarks
interfering with others' use of the Network
extensive use for noncurriculum-related communication
illegal installation of copyrighted software
unauthorized down-loading, copying, or use of licensed or copyrighted software
allowing anyone to use an account other than the account holder

The use of District and/or Network resources are for the purposes of (in order of priority):

Support of the academic program

Telecommunications

General Information

Recreation

The District and/or Network does not warrant that the functions of the system will meet any specific requirements the user may have, or that it will be error free or uninterrupted; nor shall it be liable for any direct or indirect, incidental, or consequential damages (including lost data, information, or time) sustained or incurred in connection with the use, operation, or inability to use the system.

The Student will diligently delete old mail messages frequently from the personal mail directory to avoid excessive use of the electronic mail disk space. Messages that are more than one month old can be deleted by the network administrator.

The District and/or Network will periodically make determinations on whether specific uses of the Network are consistent with the acceptable-use practice. The District and/or Network reserves the right to log Internet use and to monitor electronic mail space utilization by users.

The Student may not transfer file, shareware, or software from information services and electronic bulletin boards without the permission of the Network Administrator. The Student will be liable to pay the cost or fee of any file, shareware, or software transferred, whether intentional or accidental, without such permission. The Student will also be held liable for cost of damage to the system in order to restore network integrity.

The Student may only log on and use the Network under the supervision of a staff member and only with his/her authorized account.

The District reserves the right to log computer use and to monitor fileserver space utilization by users.

If your membership in the campus community changes your account will be reviewed by the network administrator.

Acceptable Use Policy for District Staff

In exchange for the use of the Network resources either at school or away from school, I understand and agree to the following:

The use of the Network is a privilege which may be revoked at any time and for any reason. Appropriate reasons for revoking privileges include, but are not limited to, the altering of system software, the placing of unauthorized information, computer viruses or harmful programs on or through the computer system in either public or private files or messages. The District reserves the right to remove files, limit or deny access, and refer the Staff Member if the infraction is criminal, to law enforcement authorities for criminal and/or civil prosecution.

The District reserves the rights to any material stored in files which are generally accessible to others and will remove any material which the District, at its sole discretion, believe may be unlawful, obscene, pornographic, abusive, or otherwise objectionable. Staff Members will not use their District-approved computer account/access to obtain, view, download, or otherwise gain access to such materials.

All information services and features contained on District or Network resources are intended for the private use of its registered users and any use of these resources for commercial-for-profit or other unauthorized purposes (i.e. advertisements, political lobbying), in any form, is expressly forbidden.

All property rights to a work product using District technology are assigned to the district.

The District and/or Network resources are intended for the exclusive use by their registered users. The Staff Member is responsible for the use of his/her account/password and/or access privilege. Any problems which arise from the use of a Staff Member's account are the responsibility of the account holder. Use of an account by someone other than the registered account holder is forbidden and may be grounds for loss of access privileges.

Any misuse of the account will result in suspension of the account privileges and/or other disciplinary action determined by the District. Misuse shall include, but not be limited to:

- intentionally seeking information on, obtaining copies of, or modifying files, other data, or passwords belonging to others*
- misrepresenting other users on the Network*
- disrupting the operation of the Network through abuse of hardware or software*
- malicious use of the Network through hate mail, harassment, profanity, vulgar statements, or discriminatory remarks*
- interfering with others' use of the Network*
- extensive use for non-curriculum-related communication*
- illegal installation of copyrighted software*
- unauthorized down-loading, copying, or use of licensed or copyrighted software*
- allowing anyone to use an account other than the account holder*

The use of District and/or Network resources are for the purposes of (in order of priority):

Support of the academic program

Telecommunications

General Information

Recreation

The District and/or Network does not warrant that the functions of the system will meet any specific requirements the user may have, or that it will be error free or uninterrupted; nor shall it be liable for any direct or indirect, incidental, or consequential damages (including lost data, information, or time) sustained or incurred in connection with the use, operation, or inability to use the system.

The Staff Member will diligently delete old mail messages frequently from the personal mail directory to avoid excessive use of the electronic mail disk space.

The District and/or Network will periodically make determinations on whether specific uses of the Network are consistent with the acceptable-use practice. The District and/or Network reserves the right to log Internet use and to monitor electronic mail space utilization by users.

The Staff Member may not transfer file, shareware, or software from information services and electronic bulletin boards without the permission of the Network Administrator. The Staff Member will be liable to pay the cost or fee of any file, shareware, or software transferred, whether intentional or accidental, without such permission. The Staff Member will also be held liable for cost of damage to the system in order to restore network integrity.

The District reserves the right to log computer use and to monitor fileserver space utilization by users.

If your membership in the campus community changes your account will be reviewed by the network administrator.

NETWORK AND INTERNET ACCESS AGREEMENT FOR PUBLIC
AGREEMENT

This agreement is entered into this _____ day of _____, 20 ____ between

_____, hereinafter referred to as Person, and the Public Schools of Calumet, Laurium and Keweenaw, hereinafter referred to as District. The purpose of this agreement is to provide Network; Internet access, File Sharing, Program Sharing, and Information Access, hereinafter referred to as Network, for educational purposes to the Person.

The intent of this contract is to ensure that Persons will comply with all Network and Internet acceptable use policies approved by the District.

In consideration for the privileges of using the District and/or Network resources, and in consideration for having access to information contained on the Network, or by the Network, I hereby release the District, Network and their operators and administration from any and all claims of any nature arising from my use, or inability to use the District and/or Network resources.

I agree to abide by such rules and regulations of system usage as established by the District and/or Network Policy. These rules will be available in hardcopy form in the District Office and the CLK Library.

(Sign and return to the District Network Administrator)

Signature of Person

Date

Appendix to Agreement 7540 F2.2

In compliance with CIPA the District has installed a filtering device that blocks visual depictions of material that is obscene, pornographic, or harmful to minors.

In exchange for the use of the Network resources either at the school, in the library, or away from school, I understand and agree to the following:

The use of the Network is a privilege which may be revoked at any time and for any reason. Appropriate reasons for revoking privileges include, but are not limited to, the altering of system software, the placing of unauthorized information, computer viruses or harmful programs on or through the computer system in either public or private files or messages. The District reserves the right to remove files, limit or deny access, and refer the Person if the infraction is criminal, to law enforcement authorities for criminal and/or civil prosecution.

The District reserves the rights to any material stored in files which are generally accessible to others and will remove any material which the District, at its sole discretion, believe may be unlawful, obscene, pornographic, abusive, or otherwise objectionable. Persons will not use their District-approved computer account/access to obtain, view, download, or otherwise gain access to such materials.

All information services and features contained on District or Network resources are intended for the private use of its registered users and any use of these resources for commercial-for-profit or other unauthorized purposes (i.e. advertisements, political lobbying), in any form, is expressly forbidden.

The District and/or Network resources are intended for the exclusive use by their registered users. The Person is responsible for the use of his/her account/password and/or access privilege. Any problems which arise from the use of a Person's account are the responsibility of the account holder. Use of an account by someone other than the registered account holder is forbidden and may be grounds for loss of access privileges.

Any misuse of the account will result in suspension of the account privileges and/or other disciplinary action determined by the District, including but not limited to legal action. Misuse shall include, but not be limited to:

intentionally seeking information on, obtaining copies of, or modifying files, other data, or passwords belonging to others
misrepresenting other users on the Network
disrupting the operation of the Network through abuse of hardware or software
malicious use of the Network through hate mail, harassment, profanity, vulgar statements, or discriminatory remarks
interfering with others' use of the Network
illegal installation of copyrighted software
unauthorized down-loading, copying, or use of licensed or copyrighted software
allowing anyone to use an account other than the account holder

The use of District and/or Network resources are for the purposes of (in order of priority):

Support of the academic program

Telecommunications

General Information

Recreation

The District and/or Network does not warrant that the functions of the system will meet any specific requirements the user may have, or that it will be error free or uninterrupted; nor shall it be liable for any direct or indirect, incidental, or consequential damages (including lost data, information, or time) sustained or incurred in connection with the use, operation, or inability to use the system.

The District and/or Network will periodically make determinations on whether specific uses of the Network are consistent with the acceptable-use practice. The District and/or Network reserves the right to log Internet use and to monitor electronic mail space utilization by users.

The Person may not transfer file, shareware, or software from information services and electronic bulletin boards without the permission of the Network Administrator. The Person will be liable to pay the cost or fee of any file, shareware, or software transferred, whether intentional or accidental, without such permission. The Person will also be held liable for cost of damage to the system in order to restore network integrity.

The Person may only log on and use the Network under the supervision of a staff member and only with his/her authorized account.

The District reserves the right to log computer use and to monitor files server space utilization by users.

If your membership in the campus community changes your account will be reviewed by the network administrator.

Users may be charged a fee of \$.10 per page when printing services are being used.

Public Schools of CLK

Acceptable Use Policy for Electronic Resources

iCLK Learning Initiative

All Public Schools of Calumet, Laurium and Keweenaw (CLK) students and staff are responsible for their actions and activities involving the school district's computers, electronic devices, network and Internet services, and for their computer files, passwords and accounts. These rules provide general guidance concerning the use of school computers and other electronic devices and provide examples of prohibited uses. The rules and guidelines detail acceptable use of electronic information resources under which students, staff, and all members of the Public Schools of CLK community, herein referred to as "users," will be held accountable.

The rules do not attempt to describe every possible prohibited activity. Students, parents and school staff who have questions about whether a particular activity is prohibited are encouraged to contact a building administrator. These rules apply to all school computers, all school-provided electronic devices wherever used, all uses of school servers, and Internet access and networks regardless of how they are accessed.

Acceptable Use

1. School computers, network and Internet services, and electronic resources are provided for educational purposes and research consistent with Public Schools of CLK's educational mission, curriculum and instructional goals.
2. Users must comply with all Board policies, the student handbook, and school rules and expectations concerning conduct and communications when using school computers or school-issued electronic resources, whether on or off school property.
3. Students also must comply with all specific instructions from school staff.

Prohibited Uses

Unacceptable uses of school electronic resources include, but are not limited to, the following:

1. Accessing or Communicating Inappropriate Materials – Users may not access, submit, post, publish, forward, download, scan or display defamatory, abusive, obscene, vulgar, sexually explicit, sexually suggestive, threatening, discriminatory, harassing, bullying and/or illegal materials or messages.
2. Illegal Activities – Users may not use the school district's computers, electronic devices, networks, or Internet services for any illegal activity or in violation of any Board policy/procedure or school rules. Public Schools of CLK and its employees and agents assume no responsibility for illegal activities of students while using school computers or school-issued electronic resources.
3. Violating Copyrights or Software Licenses – Downloading, copying, duplicating and distributing software, music, sound files, movies, images or other copyrighted materials without the specific written permission of the copyright owner is prohibited, except when the use falls within the Fair Use Doctrine of the United States Copyright Law (Title 17, USC) and content is cited appropriately.
4. Plagiarism – Users may not represent as their own work any materials obtained on the Internet (such as term papers, articles, music, etc). When using other sources, credit must be given to the copyright holder.
5. Use for Non-School-Related Purposes - School district's computers, electronic devices, networks and Internet services are provided for purposes related to educational programs, school operations, and performance of job responsibilities. Incidental personal use of school devices is permitted as long as such use: 1) does not interfere with the user's responsibilities and performance; 2) does not interfere with system operations or other system users; and 3) does not violate this policy and

the accompanying rules, or any other Board policy, procedure or school rules. "Incidental personal use" is defined as use by an individual for occasional personal communications.

6. Misuse of Passwords/Unauthorized Access – Users may not share passwords; use other users' passwords; access or use other users' accounts; or attempt to circumvent network security systems.

7. Malicious Use/Vandalism – Users may not engage in any malicious use, disruption or harm to the school district's computers, electronic devices, network and Internet services, including but not limited to hacking activities and creation/uploading of computer viruses.

8. Avoiding School Filters – Users may not attempt to or use any software, utilities or other means to access Internet sites or content blocked by the school filters.

9. Unauthorized Access to Blogs/Social Networking Sites, Etc. – Users may not access blogs, social networking sites, etc. prohibited by building administration or the Public Schools of CLK Technology Department. Teachers and students using authorized social networking sites for educational projects or activities shall follow the age requirements and legal requirements that govern the use of social networking sites in addition to the guidelines established in this policy.

10. Wasting System Resources - Users shall not use the network in such a way that would waste system resources or disrupt the use of the network by others. This includes but is not limited to excessive printing, file storage, online games, and video/audio streaming not directly related to educational projects, as determined by the supervising instructor or building administrator.

11. Unauthorized Equipment - Users may not attach unauthorized equipment, including personal laptops, tablets, and handheld devices, to the district network without permission from the Public Schools of CLK Technology Department.

12. All information services and features contained on District or Network

resources are intended for the private use of its registered users and any use of these resources for commercial-for-profit or other unauthorized purposes (i.e. advertisements, political lobbying), in any form, is expressly forbidden.

Compensation for Losses, Costs and/or Damages

Users may be responsible for compensating the school district for any losses, costs or damages incurred for violations of Board policies/procedures and school rules, including the cost of investigating such violations. The school district assumes no responsibility for any unauthorized charges or costs incurred by users while using school district computers, devices, or the school network.

Student Security

1. Users may not reveal personal information, including a home address and phone number, about themselves or another individual on any unsecured electronic medium, such as web sites, blogs, podcasts, videos, wikis, or social networking sites. If users encounter dangerous or inappropriate information or messages, they shall notify the school administration immediately.
2. Staff may post student pictures on district/school/classroom "public" websites as long as the student's name or other identifying information is not included and the parents have not indicated differently on the student's directory information form. Students' grades, test results, or identifying pictures may be stored only on district-approved secure sites that require a username and password for authorized individuals to access.
3. All Public Schools of CLK schools are closed campuses. Public Schools of CLK retains all rights concerning any recording and/or publishing of any student's or staff member's work(s) or image(s). Students must obtain permission from a Public Schools of CLK staff member to publish a photograph or video of any school-related activity. It is best practice and common courtesy to ask permission before recording an individual or groups.

4. The use of cameras in any type of electronic device is strictly prohibited in locker rooms and restrooms.
5. Public Schools of CLK staff must maintain the confidentiality of student data in accordance with the Family Education Rights and Privacy Act (FERPA).
6. Students may be issued a school email address to improve student communication and collaboration on school projects. Email shall be used only for educational purposes that directly relates to a school project or assignment.

Technology Privacy

All computers, telephone systems, voice mail systems, electronic mail, and electronic communication systems are the district's property. The district retains the right to access and review all electronic and voice mail, computer files, databases, and any other electronic transmissions contained in or used in conjunction with district's computer system, telephone system, electronic mail system, and voice mail system. Students and staff should have no expectation that any information contained on such systems is confidential or private.

System Security

Any user who identifies a security problem must notify his/her teacher or building administrator immediately. The user shall not demonstrate the problem to others or access unauthorized material. Staff shall immediately report any potential security breaches to the Public Schools of CLK Technology Department. Staff should change their passwords to all systems at least once every 90 days.

Personal Devices

All users are prohibited from using privately-owned electronic devices in school unless explicitly authorized by the building Principal or Public Schools of CLK

district administration.

Additional Rules for Laptops, iPads, or other Electronic Devices Issued to Students or Staff

1. Electronic devices loaned or leased to students or staff shall be used only for educational purposes that directly relate to a school project or assignment, unless otherwise explicitly authorized by building administration.
2. Users are responsible for the proper care of electronic devices at all times, whether on or off school property, including costs associated with repairing or replacing the device.
3. Users must report a lost or stolen device to the building administration immediately. If a device is stolen, a report also should be made immediately with the local police.
4. The policy and rules apply to the use of the electronic device at any time or place, on or off school property. Students are responsible for obeying any additional rules concerning care of devices issued by school staff.
5. Violation of policies or rules governing the use of electronic devices or any careless use of the device may result in a student's device being confiscated and/or a student only being allowed to use the device under the direct supervision of school staff. The student will also be subject to disciplinary action for any violations of Board policies/procedures or school rules.
6. Parents are responsible for supervising their child's use of the device when not in school.
7. The device configuration shall not be altered in any way by users. No software applications shall be installed, removed, or altered on the device unless permission is explicitly given by the teacher or building administrator.
8. The device is to be used only by the student or staff member to whom it is issued. The person to whom the device is issued will be responsible for any

activity or action performed on the device.

9. The device and accessories must be returned in acceptable working order by the last day of each school year, upon withdrawal or exit date from the school district, and whenever requested by school staff.

Terms of Use

Public Schools of CLK reserves the right to deny, revoke or suspend specific user privileges and/or take other disciplinary action, including suspensions or expulsion from school, for violations of this policy. Additionally, all handbook regulations apply to the use of the Public Schools of CLK network, Internet, and electronic resources. All property rights to a work product using District technology are assigned to the District. If a student or staff changes their membership in the campus community their account will be reviewed by the network administrator and may be terminated.

Disclaimer – Public Schools of CLK, its employees and agents, make no warranties of any kind, neither expressed nor implied, concerning the network,

Internet access, and electronic resources it is providing. Furthermore, Public

Schools of CLK is not responsible for:

1. The accuracy, nature, quality, or privacy of information stored on local servers or devices or information gathered through Internet access.
2. Any damages suffered by a user (whether the cause is accidental or not) including but not limited to, loss of data, delays or interruptions in service, and the infection of viruses or other malware on personal computers or other devices.

3. Unauthorized financial obligations resulting from the use of Public Schools of CLK electronic resources.

~i**CLK**: Innovate, **C**reate, **L**earn, **K**now – A CLK School District Learning Initiative~

Infrastructure

Current System

Brief Overview

End-User Computers:

The district has about 770 PC computers deployed for use by students, teachers and administrative staff.

About one third of those computers are recent purchases (3-5 years old) and are expected to provide several years of additional service.

The other two thirds are 6-9 years old. Those systems have been deemed too old to cost effectively service.

iPad2 tablet computers have been deployed to all students in grades 4-12 and almost all teaching, para-pro and special education staff.

End-User Software:

Almost all of the 770 PC's are running Windows XP Pro SP3 which is near end-of-life status by Microsoft (meaning it will no longer receive automatic patches to mitigate security vulnerabilities).

Additionally, almost all 770 PC's are running Microsoft Office XP (2002) which has reached end-of-life and is vulnerable to security exploits as it is no longer being patched by Microsoft.

Scholastic reading assessment and intervention software (SRI, READ180, and ReadNaturally) are in use in the Washington Middle School and Horizons high school.

Network Infrastructure (cabling/wifi):

The district installed category 5 cabling to all classrooms and offices (120 rooms) in all buildings in the late 1990's.

Gigabit network switches (HP 2848 with an HP 5308xl core switch) were installed in the summer of 2006 to support at least 825 computers.

In late spring 2011, Category 6 cabling and wireless access points were installed to create a campus wide WiFi network. Aerohive AP120, a HiveManager and POE network switches were installed to support at least 1100 iPad2 devices.

Network Infrastructure (servers/storage):

The district operates file servers in support of end-user file storage, network printing, and network based applications.

Network file servers and storage are 4-7 years old. Storage is filled to near maximum capacity on file and web servers. Backup storage is at maximum capacity for standard backup of data files modified during the day. Backup storage is not capable of handling backup of e-mail system.

Network operating system software is Microsoft Windows Server 2003.

Network application software includes a student management system (Skyward), staff e-mail/calendaring (Exchange 2007) and web server (IIS 6).

Network Infrastructure (internet):

The district obtains internet access service via REMC 1. Connection to REMC 1 is provided via leased fiber (Charter Communications) between CLK's main campus in Calumet, MI and the REMC 1 office in Hancock, MI. End-point interface to the fiber is provided via Gigabit network switches. REMC 1 provides CLK with burstable bandwidth which generally runs at 50Mbps with peak usage exceeding 100Mbps.

All internet web traffic is filtered through CLK's Lightspeed Total Traffic Control (TTC) appliance. Multiple levels of user filtering are provided so that staff can access to sites such as youtube which are blocked to students for CIPA and bandwidth/ timewasting purposes.

CLK provides students with iPad2 that are configured with the Lightspeed Mobile Filter app. The Mobile Filter app allows students to use the iPad2 off-campus yet filter their internet web browsing via CLK's TTC.

CLK uses a Cisco ASA 5520 for internet firewall between its local network and the REMC 1/Charter internet connection.

Telecommunications:

The district main campus PBX phone system was installed in the late 1990's that provides shared access to a Centrex/POTS phone lines to main campus classrooms and administrative offices.

The Horizons High School has a small PBX installed in 2011 that provides shared access to a set of CO phone lines to all classrooms and the administrative office.

The district has fax machines with supporting CO phone lines in all administrative offices.

The district has CO phone lines installed to support three elevators.

Fiber cabling leased from Charter Communications (lease expires ????) is used to obtain internet access via the REMC 1 office in Hancock, MI. Current usage shows sustained download throughput for the district generally running at around 50Mbps with peak usage exceed 100Mbps.

Two DS1/T1 data circuits (3.2Mbps full duplex capacity) are used to connect the Horizons High School in Mohawk, MI with the main campus in Calumet, MI. This circuit is used to provide access to internet services for Horizons staff/students. (note: 2nd circuit was added in summer of 2011 along with new routers for bonding).

Other Technology:

The district has numerous analog copiers deployed in administrative offices and staff work areas.

Network and Data Security

Keeping the district network and its data secure is paramount. Virus/Malware protection (AVG 8.5), firewall (Cisco ASA5520), individual network accounts, access control lists for shared data, and close oversight by network administrators are key measures utilized to prevent unauthorized personnel from accessing district data and/or utilizing district technology.

Disaster Recovery

Tape backup systems located in district MDF's provide primary recovery capability of data stored on district file servers. Daily offsite backup is provided for disaster recovery purposes for the Skyward student management system database. Offsite backup is performed to backup systems at the REMC1 office in Hancock, Michigan.

Internet Safety and CIPA Compliance

The district's primary method for ensuring student safety while using district technology is by have every internet connected device run through Lightspeed (<http://www.lightspeedsystems.com/>) filtering. From the Lightspeed site:

The Web Filter provides powerful, easy-to-use features for web content filtering and safe Web 2.0 access:

- [Comprehensive and accurate URL database](#) with more than 1 billion entries grouped into education-specific categories
- Daily URL database updates
- Ability to create different policies based on user, IP, group, organizational unit, and domain
- [Mobile filtering](#) to extend policies and protection to off-network users
- [Web zones](#) to give teachers the ability to expand or contract Internet access for specific assignments, periods, or classes
- Lockouts to allow administrators to set abuse thresholds triggering an Internet lockout
- Customizable block pages
- Multiple layers of [anonymous proxy detection](#)
- Flexible filtering for thin clients
- Peer-to-peer application and file-type blocking
- Integration with Student Information Systems
- Safe Search
- Ability to accommodate even the heaviest traffic loads, [up to 10Gb](#), without hindering performance
- [Educational Resource Library](#) with unfiltered access to educational YouTube videos, web sites, wikis and blogs, documents, and more
- [My Big Campus](#) for safe Web 2.0 and collaboration

Additionally, the district maintains an acceptable use policy (AUP) between staff and students which includes descriptions of conduct that is considered appropriate and/or inappropriate while using district technology such as computers, file servers, the internet, etc.

Direct supervision by staff, the filtering system, and the AUP are all key components to ensure district technology is used safely and in compliance with district policies and regulations associated with CIPA (Children's Internet Protection Act) and the USF/E-Rate program.

Computer Labs

High Schools Labs

The business lab is used for word processing, spreadsheet, and database applications. It is also used for computer aided accounting. There is Internet access to all machines. The computers are running Windows OS.

The CAD lab is comprised of Windows OS machines also. They are all connected to the district network. All have Internet access as well as AutoCAD, Chief Architect and other drafting programs available.

The main High School computer lab is made of Windows OS machines. Every computer has Internet access through the network. Video editing capabilities are available on all machines. These machines are used for basic document editing, 3D modeling, GIS, advanced peripherals usage, and programming.

The High School supports one writing lab containing Windows OS machines. Every computer has access to the district network and the Internet. The lab is a general purpose lab for Internet research and document editing. The lab is utilized by the entire High School staff as a curriculum tool.

Horizons Alternative High School Labs

The Alternative School has a two computer labs utilizing Windows based machines that are networked with Internet access. These labs are general purpose labs for Internet research and document creation/editing. The labs are also utilized as a curriculum tool supporting Nova Net curriculum recovery activities.

Washington Middle School Labs

The Washington Middle School has a three computer labs, one dedicated to each grade level, utilizing Windows based machines that are networked with Internet access. The labs are instructional labs to teach students basic and intermediate skills, as well as for researching material or completing projects for other core classes. These labs also use computers to drive new technologies and introduce students to these technologies.

Library Lab

Adjacent to the library is a lab of Windows OS based computers. These computers are available to any teacher in the district for whole class projects. This lab is used on a daily basis during the school day by various elementary classes for various lessons and projects. The library lab is also available to be used by the public.

Elementary Technology

The elementary teachers utilize 50 wireless computers for integration of lessons in the classrooms. These machines are available by signing them out. By utilizing the machines in the classroom and the wireless computer carts, teachers can provide access to all their students right in their classroom.

Summary

CLK Schools currently runs a wide range of computer platforms in almost entirely a networked environment. The machines in the system range from older Macintosh and PC machines to modern high speed Macs, PC and iPad2s. The network is highly structured and serving the entire district.

Technologies to be Acquired

End-user Computers:

There are no plans to acquire additional computers.

There are no plans to acquire additional iPad devices for K-3 students.

End-user Software:

Elementary plans to acquire 360 Scholastic SRI licenses for 3rd-5th grade students for the 2012-13 school year.

There are no other plans to acquire additional software other than examining possible open source office suites and other various open source software solutions. There is also the possibility of developing in-house applications for iPad use.

Network Infrastructure (cabling/wifi):

There are no plans to acquire additional cabled and wifi network infrastructure.

Network Infrastructure (servers/storage):

Plans will be developed to acquire network file servers, network operating system software and file server storage during the summer of 2012 to support increased demands for storing digital/electronic format learning materials (scanned documents, podcasts, student work, etc.).

Network Infrastructure (internet):

There are no plans to acquire additional internet access, filtering and/or firewall capabilities.

Telecommunications:

There are no plans to acquire additional phone systems or fax machines.

Other Technology:

The district plans to upgrade/replace analog copiers with digital network multi-function copiers to increase student access to materials in electronic format.

Continous Interoperability

End-user Computers:

Computers that are less than 6 years old will be serviced as needed (i.e. those used with interactive projectors, by administrative staff and in WMS/CHS computer labs).

Computers 6 years old and older will not be serviced/replaced.

iPad2 tablet devices are generally non-servicable and if not covered by warranty will need to be replaced as needed.

End-user Software:

Computers less than 6 years old require upgrade to the latest version of Windows and Office software (i.e. those systems used with interactive projectors, by administrative staff, and in WMS/CHS computer labs).

There are no plans for these future Windows and Office software upgrades.

iPad2 tablet devices receive free iOS updates from Apple. Updates for purchased apps have thus far been free. Upgrades will be installed as needed.

Network Infrastructure (cabling/wifi):

Existing cabling and wifi infrastructure will be serviced as needed. There are no plans for future upgrade.

Network Infrastructure (servers/storage):

There are no plans for future upgrade of servers/storage.

Network Infrastructure (internet):

There are no plans for future upgrade of internet access, filtering or firewall capabilities.

Telecommunications:

Failure of the main campus PBX is a possibility that must be considered due to age.

There are no current or future plans to upgrade/replace the main campus PBX.

Fax machines will be serviced as necessary and phased out as networked multi-function copiers are deployed.

Other Technology:

The analog copiers will be phased out and replaced/upgraded with networked digital copiers as feasible.

Projected Timetable Implementation

School Year 2012-2013

Continue to provide staff with publications on technology integration.
Continue with in-service programs.
Increase the availability of information for parents via the Internet.
Gather volunteers from faculty and staff for the technology committee and solicit volunteers from the community.

School Year 2013-2014

Continue to provide staff with publications on technology integration.
Reevaluate and restructure the middle school and high school curriculum.
Continue with in-service programs.
Evaluate parent access to student information via the Internet.
Install WiFi on district busses.
Gather volunteers from faculty and staff for the technology committee and solicit volunteers from the community.

School Year 2014-2015

Continue to provide staff with publications on technology integration.
Expand computer availability in the district.
Continue to follow the computer replacement plan of action by replacing computers in a High School Lab and replacing iPads.
Continue with in-service programs.
Gather volunteers from faculty and staff for the technology committee and solicit volunteers from the community.

The annual CLK Technology Budget includes money to cover the cost of the following:

- Technology staff salary and benefits.
- Centrex, and month-to-month local/long distance telephone service.
- Upgrade and maintenance of the internal telephone system.
- Additional telephone and network cabling infrastructure.
- Purchase and maintenance of desktop workstations, network file servers, network printers, and network communication equipment.
- Purchase and maintenance of software and associated licenses for file server, office productivity, anti-virus, web server, mail server, firewall, and internet content filtering systems.
- Purchase and maintenance of the digital devices and software to prepare and display digital presentations in (i.e. digital cameras, digital video recorders, scanners, data projectors, and video conferencing equipment).
- Purchase and maintenance of a student record management system.

- Purchase and maintenance of a district accounting system.
- Internet Service Provider fees.
- Data circuits for internet access between Calumet and the Kindergarten School in Mohawk, and between Calumet and the Internet Service Provider.
- Purchase and maintenance of the equipment in the distance learning room.
- Purchase on-line and other tutorial learning aides along with required hardware and software

Projected Expenditures

2012-2013 School Year

Item	Projected Cost
Local Telephone Service	\$52,000.00
Long Distance Service	\$2,500.00
Cellular Telephone Service	\$13,000.00
Internet Service	\$42,500.00
Mohawk Data Circuit	\$21,700.00
Student E-Mail Accounts	\$2,100.00
Internet Firewall	\$1,400.00
Personnel	\$228,185.00
Hardware	\$15,000.00
Software/Licenses	\$11,000.00
Credit Recovery Software	\$12,000.00
Training	\$5,000.00
Total	\$406,385.00

2013-2014 School Year

Item	Projected Cost
Local Telephone Service	\$52,000.00
Long Distance Service	\$2,500.00
Cellular Telephone Service	\$13,000.00
Internet Service	\$42,500.00
Mohawk Data Circuit	\$21,700.00
Student E-Mail Accounts	\$2,100.00
Internet Firewall	\$1,400.00
Personnel	\$235,031.00
Hardware	\$20,000.00
Software/Licenses	\$10,000.00
Credit Recovery Software	\$12,000.00
Training	\$5,000.00
Total	\$417,231.00

2014-2015 School Year

Item	Projected Cost
Local Telephone Service	\$52,000.00
Long Distance Service	\$2,500.00

Cellular Telephone Service	\$13,000.00
Internet Service	\$42,500.00
Mohawk Data Circuit	\$21,700.00
Student E-Mail Accounts	\$2,100.00
Internet Firewall	\$1,400.00
Personnel	\$242,081.00
Hardware	\$520,000.00
Software/Licenses	\$12,000.00
Credit Recovery Software	\$12,000.00
Training	\$5,000.00
Total	\$956,381.00