

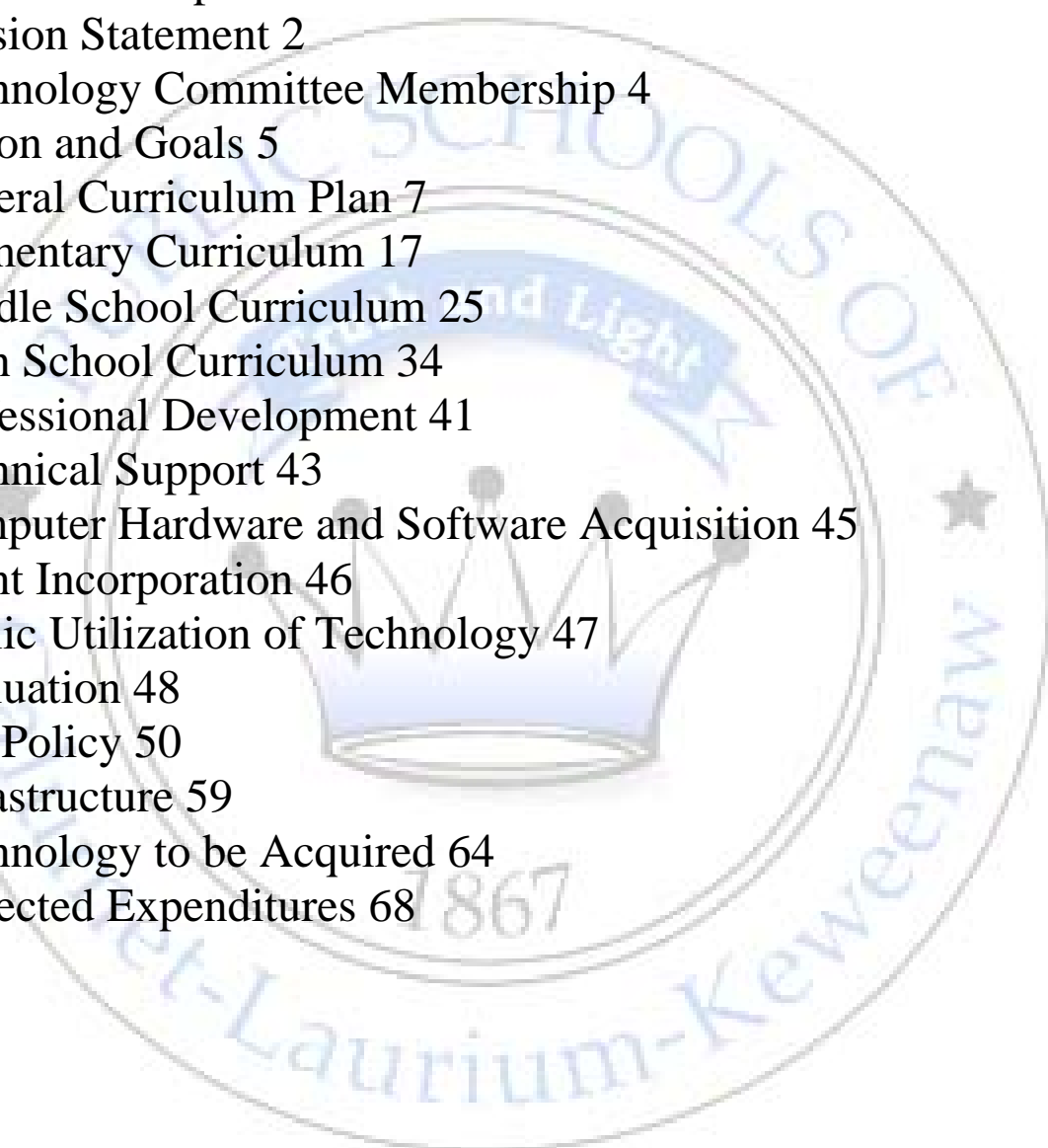
# Public Schools of Calumet-Laurium-Keweenaw Technology Plan



District: Public Schools of Calumet-Laurium- Keweenaw (31030)	Address: 57070 Mine St. Calumet, MI 49913	ISD: Copper Country ISD
Phone: (906) 337-0311	Fax: (906) 337-1406	Effective Date: July 1, 2009 to June 30, 2012
Contact: Darryl Pierce	Email: <a href="mailto:dpierce@clkschools.org">dpierce@clkschools.org</a>	District Web Site: <a href="http://www.clkschools.org">www.clkschools.org</a>
Technology Plan Contact/Technology Director: Michael Roland	Email: <a href="mailto:mroland@clkschools.org">mroland@clkschools.org</a>	Technology Plan URL: <a href="http://www2.clkschools.org/District/District_Plan_2009-2012.pdf">http://www2.clkschools.org/District/District_Plan_2009-2012.pdf</a>

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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-694

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-352

Teachers-35

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-469

Teachers-30

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 December, 2008)

Michael Roland	Committee Chair
Anton Pintar	Network/Information Administrator
Mark Lucier	District Technician
Donna Kezele	Technology Assistant/Elementary Staff
Darryl Pierce	District Superintendent
George Twardzik	High School Principal
Sean Jacques	Assistant High School Principal
Christopher Davidson	Horizons High School Principal
Mary Niebuhr	Assistant Middle School Principal
Karyn King	Elementary Principal
Debra Oyler	Librarian/Media Specialist
Lisa Twardzik	High School Staff
Mark Bonenfant	High School Staff
Julie Goldsworthy	Middle School Staff
Margery Gronlund	Middle School Staff

Community members to be included again starting in the 2009-2010 school year.

# 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 distributed through to district web site through to use of blogs, posted daily announcements and on-line calendars.

# 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: March 2009

### 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***

Mrs. Oyler in the library does a 3-day presentation on web searches, followed by a written assessment. (gr.6)

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.

## **CHS News**

9, 10, 11, 12

This one-semester video production course teaches students to write, produce, direct and present a live news program using video. Course goals include gathering information, operating video equipment, directing, editing and producing a news program and presenting the news to the school each day during a live program via the district's cable system. Topics covered will include information gathering; interviewing, computer aided video editing, video camera operation, titling operation, switcher operation and information presentation.

### Course Goals

Students will gather information.  
Students will operate video equipment.  
Students will produce a news program.  
Students will direct a news program.  
Students will present news.

## **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

## **Advanced MOUS**

9, 10, 11, 12

In addition to reviewing and enhancing the students' computer skills, students will be participating in a fictitious community where they will learn to operate their own business. As a business owner, students will communicate with other classmates in the community and learn to develop the many skills that will give them that competitive edge when entering the workforce.

### Course Goals

Students will create documents in the word processor using advanced techniques.

Students will create spreadsheets using advanced techniques.

Students will create graphs and charts using spreadsheets.

Students will create and design databases.

Students will keep records electronically.

Students will use computerized payroll applications.

Students will create presentations using appropriate software.

### Major Topics Covered

- Network/File Management
- Operating System
- Keyboard Review
- Review Office
- Word Processing
- Excel
- PowerPoint
- Expand Excel
- Access Database
- Office and Web Pages
- Concentrate on projects connected to work
- Macros in Office
- Digital Cameras
- Scanners
- Video Editing
- Audio Editing
- BPA Applications

## **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.

*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 Copier Repair/Technology Maintenance position. The responsibilities of this position will include the repair and maintenance of the district copiers. 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. The district in conjunction with the library also offers night courses on basic Internet use, and on specific Internet resources. Classes include "Genealogy and the Internet.", "E-mail", "Job Hunting on the Internet", and "Small business and the WWW". These courses are open to the public and free of charge.

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. The survey that is on the following page will be used as one source of information used to evaluate technology integration. 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 STAR chart diagnostic tool will be used to evaluate the status of the district's technology. This form will be completed by the Computer/Technology Coordinator with aid from the above mentioned sources. The results from this tool will be an indication of both hardware and software usage.

The Technology Integration Project, as described below, will be used as an indicator of technology integration into the curriculum. Not only will the project provide information about the use of technology, but it will also provide teachers with a resource of possible lessons they could utilize. This sharing of curriculum integration should spur added motivation, especially because the lessons are designed and implemented by peers.

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

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 computer?

Do not use  
multiple times a week  
multiple times a day

How often do you use a television 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 computer 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:

Hardcopy 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.clk.k12.mi.us/>

By email request to: [policy@clk.k12.mi.us](mailto:policy@clk.k12.mi.us)

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.



## 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 files server 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 fileserver 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.

# **Infrastructure**

## **Current System**

### **Brief Overview**

CLK Schools operates approximately 700 networked computers located in regular classroom environments and in computer labs. Almost all are PC's running Windows XP Professional (there are about a dozen Apple Macintosh and a few newer PC's are running Windows Vista).

### **Network Operations Center**

CLK Schools has two Network Operation Centers (also referred to as Main Distribution Facilities or MDF's).

The primary MDF is located within the public library on the main campus in Calumet. The MDF houses a file/print server, an IIS 6 web server, an Exchange 2007 e-mail server, a Skyward student managements system server, a PC management server (for centralized distribution of anti-virus and windows updates to the staff/student PC's), and a Lucent Definity/Audix PBX phone system. All but one of these servers are PC based and run Windows Server 2003. The exception is the Skyward student management system server which is an IBM p510 running IBM AIX 5.

The Horizons high school in Mohawk also operates a NOC or MDF which houses one PC based Windows 2003 file/print server and a Lucent Partner Plus PBX phone system.

### **Cabled Infrastructure**

At the main campus in Calumet, fiber optic cabling connects the MDF to various equipment rooms (also referred to as Intermediate Distribution Facilities or IDF's) in the elementary school, middle school, and high school. There are no IDF's at the Horizons High School in Mohawk.

Within all of CLK's schools, category 5 UTP cabling is used to connect the desktop computers to the networking equipment in the various IDF's and to the phone systems in the MDF's. RG-58 coax cabling is used to distribute local cable television to each classroom.

An HP Procurve 5308 XL serves as the core switch in the MDF at the main campus in Calumet. It connects the various HP Procurve 2848 switches are installed in all MDF's and IDF's to provide 10/100/1000 Mega bit per second switched ethernet network connectivity to end user computers.

Two Cisco 1600 series ethernet routers are used in conjunction with a leased T1 data circuit to connect the main campus MDF in Calumet to the MDF at the Horizons High School approximately 10 miles away in Mohawk.

## **Wireless Infrastructure**

The Elementary school utilizes five Apple Airport Extreme 802.11b/g wireless access points (WAP's) to network 81 laptop PC computers. All other district buildings have very limited or no access to wireless networking.

## **Distance Learning Network**

CLK provides a distance learning classroom located in its inter-connect facility that has H.323 video conference connectivity to not only other district's distance learning classrooms within the CCISD/GOISD but also any school on the Internet that has H.323 compatible systems. A Polycom VS4000 video conferencing unit is the key component of CLK's distance learning facility.

## **Classroom Computers**

Every classroom in the district has at least one computer that is connected to the network. Most of the classrooms in the elementary have at least 3 computers available. The classroom computers have Internet access as well as access to the programs supplied over the district's network. All teachers have an email address provided by the district. All teachers have a personal volume set aside on one of the servers for storage of their files. The network then allows each teacher to access their information from any location within the district.

## **Television System**

Every classroom has a television that has access to the local cable company television network operated by Charter. Charter provides and maintains equipment in the district's MDF's and IDF's from which the cable television signal is distributed to classrooms via RG-58 coax cabling.

The district has a video production classroom in the high school that is capable of making internal TV broadcasts to all televisions located on the main campus in Calumet. It does so by filtering out one of the Charter provided channels (currently channel 4) and replaces it with a signal from the video production room. The signal broadcast from the video production room is limited to the main campus only. It is not available to Charter customers nor is it available to the Horizons building in Mohawk.

## **Phone System**

The district operates and maintains a two PBX systems: one at the main campus in Calumet and one at the Horizons High School in Mohawk. It provides internal phone calling between all classrooms and administrative offices and provides all locations access to the public telephone switched network (PTSN).

## **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 to have teaching staff directly supervise their students. The district also realizes it is not realistic for teachers to directly and continuously monitor all of their students at all time while they use the internet in a classroom or computer lab setting.

For this reason, the district utilizes an electronic filtering system as an additional mechanism to help protect staff and students from inadvertently accessing inappropriate material via the internet. Currently, the district is using an internet filtering system called Dansguardian. Network administrators monitor this system to ensure that it is functioning properly and notify appropriate staff of access to inappropriate material.

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 two writing labs 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 and PCs. The network is highly structured and serving the entire district.

## **Technologies to be Acquired**

### **Current Status**

#### **District**

- Entire main campus wired
- Alternative Education Center wired and connected to the main campus through a T1 line
- Grading and attendance being done via a networked student record system utilizing computers in the classroom for data entry
- Centralized network
- Wireless network connections (currently only limited connections)
- File sharing
- Application sharing
- Electronic communication replacing paper communication
- World Wide Web access and publishing
- Lunch program is automated
- 30 Station lab adjacent to library
- Network all computers that are capable
- Distance learning room completed and connected
- Installed remote operations programs on classroom and lab computers
- District broadcast room is established and operational
- Common word processing program throughout the district
- Family access to student data

#### **Elementary**

- 3 to 4 networked computers in each room
- 50 laptop computers with wireless connectivity for use by all staff
- Every classroom has a television and VCR

#### **Washington**

- Networked computer in every room
- 30 Windows OS machines in lab for sixth grade computer classes
- 30 Windows OS machines in lab for seventh grade computer classes
- 30 Windows OS machines in lab for eighth grade computer classes
- Video technology class broadcasting daily news
- Every classroom has a television and VCR
- 30 PDAs available for classroom use

#### **High School**

- 28 Windows OS machines in Computer Science Lab; networked
- 25 Windows machines in Business Lab; networked
- 20 Windows machines in Drafting Lab; networked

- 30 Windows machines in open lab for staff access
- 30 Windows machines in open lab for staff access
- 10 portable laptops with wireless access for student use during study halls and teacher checkout for class projects
- Video production room with 5 computers and equipment for production and airing of original programming
- Technology Lab
- Counselor's office using networked computers for MOIS, ACT, Internet, etc...
- Desktop Publishing Machine in Art Room (Photoshop, scanning, etc.)
- Television and VCR in all classrooms

### **Library**

- Network 6 PC machines and 4 Macintosh machines
- 4 PC staff machines
- 2 Macintosh staff machines
- UM community health information workstation
- Closed circuit television station
- Kurtzweil reader
- Overhead data projector
- G3 with video capabilities and an attached scanner
- 2 Digital cameras
- 2 stations for young learners
- Magazine express station
- 3 automated card catalog PCs
- 2 LCD projectors with capabilities to project video and data, each with an attached iMac DV with wireless connectivity
- iMac DV with digital video editing capabilities
- 30 Windows OS machines in lab for use by students, staff and public

### **Printers**

- 47 printers being utilized across the district with approximately 95% networked

## **Where we are going**

### **District**

Increase electronic communication minimizing paper communication  
World Wide Web publishing  
Wireless network all computers that can take advantage of mobile connectivity  
Implement Whole Campus Wireless Network  
Expand the use of distance learning facility  
Digitize district records  
Update and increase computers in district  
Begin process of 1 computer for every student (1-to1 initiative)  
Interactive white boards in every classroom  
Update phone system to modular VOIP

### **Elementary**

Increase the number of portable machines for use in rooms  
Integrate computer usage into general curriculum  
Increase staff training

### **Washington**

Integrate computer usage into general curriculum  
Increase staff training

### **High School**

Integrate computer usage into general curriculum  
Increase staff training

### **Horizons**

Integrate computer usage into general curriculum  
Increase staff training

### **Library**

3 station for young learners and 1 for parents with youngsters  
6 staff stations

## Projected Timetable Implementation

### **School Year 2009-2010**

Continue to provide staff with publications on technology integration.  
Reevaluate and restructure the middle school and high school curriculum.  
Continue with in-service programs.  
Increase the availability of information for parents via the Internet.  
Upgrade computers district-wide  
Purchase white board technology for every classroom  
Upgrade phone system to modular VOIP

### **School Year 2010-2011**

Continue to provide staff with publications on technology integration.  
Expand computer availability in the district.  
Continue with in-service programs.  
Evaluate parent access to student information via the Internet.  
Create a seamless wireless network throughout the district.  
Provide video capabilities on the web server.  
Continue to follow the computer replacement plan of action.

### **School Year 2011-2012**

Continue to provide staff with publications on technology integration.  
Expand computer availability in the district.  
Continue with in-service programs.  
Continue to follow the computer replacement plan of action.

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 new VOIP phone system
- Purchase white board technology for every district classroom
- Purchase on-line and other tutorial learning aides along with required hardware and software

## **Projected Expenditures**

### **2009-2010 School Year**

<b>Item</b>	<b>Projected Cost</b>
Local Telephone Service	\$42,000.00
Long Distance Service	\$2,500.00
Cellular Telephone Service	\$13,000.00
Internet Service	\$35,000.00
Mohawk Data Circuit	\$10,000.00
Student E-Mail Accounts	\$2,000.00
Internet Firewall	\$1,100.00
Personnel	\$193,339.00
Hardware	\$722,000.00
Software/Licenses	\$5,000.00
Credit Recovery Software	\$18,750.00
Training	\$20,000.00
<b>Total</b>	<b>\$1,064,689.00</b>

**2010-2011 School Year**

<b>Item</b>	<b>Projected Cost</b>
Local Telephone Service	\$42,000.00
Long Distance Service	\$2,500.00
Cellular Telephone Service	\$13,000.00
Internet Service	\$35,000.00
Mohawk Data Circuit	\$10,000.00
Student E-Mail Accounts	\$2,000.00
Internet Firewall	\$1,100.00
Personnel	\$203,006.00
Hardware	\$100,000.00
Software/Licenses	\$7,500.00
Credit Recovery Software	\$18,750.00
Training	\$0.00
<b>Total</b>	<b>\$434,856.00</b>

**2011-2012 School Year**

<b>Item</b>	<b>Projected Cost</b>
Local Telephone Service	\$42,000.00
Long Distance Service	\$2,500.00
Cellular Telephone Service	\$13,000.00
Internet Service	\$35,000.00
Mohawk Data Circuit	\$10,000.00
Student E-Mail Accounts	\$2,000.00
Internet Firewall	\$1,100.00
Personnel	\$213,156.00
Hardware	\$110,000.00
Software/Licenses	\$8,000.00
Credit Recovery Software	\$18,750.00
Training	\$17,000.00
<b>Total</b>	<b>\$472,506.00</b>