

# North Muskegon Public Schools Technology Plan



**North Muskegon Public Schools**  
**1600 Mills Avenue**  
**North Muskegon, MI 49445**

231.719.4100  
District code: 61230

\*

**July 1, 2012—June 30, 2015**

\*

Technology Coordinator  
—Paul Henderson—  
henderpa@nmps.k12.mi.us  
p. 231.719.4150  
f. 231.744.0739

\*

Muskegon Area Intermediate School District

\*

**This plan may be viewed Via the Internet at:**  
**<http://www.nmps.k12.mi.us>**

# Table of Contents

## Introduction

Mission .....	4
Demographics .....	4

## Vision and Goals

Vision .....	5
Goals .....	5

## Curriculum

Curriculum Integration .....	6
Student Achievement .....	6-7
Technology Delivery .....	8
Parent Communications & Community Relations.....	8-9
Collaboration.....	9

## Professional Development

Professional Development.....	10-11
Supporting Resources.....	11

## Infrastructure, Hardware, Technical Support, and Software

Current Status of hardware, software, network infrastructure, telecommunications and other technology services:

Data Network .....	12
Video Network.....	13
Telephone System .....	13
Servers and Internet Access .....	14
Computer Systems and Printers.....	15
Data Projectors, Televisions and VCR/DVD Players .....	15-16
Video Equipment and Digital Cameras.....	16-17
Library Automation and Classroom Configuration .....	18
Flex Lab Technology .....	19
Video Surveillance System .....	19
Software .....	19-20
Technical Support and Increased Access.....	20-21
Assistive Technology.....	21

## Funding and Budget

Budget .....	22
Coordination of Resources .....	23

## Monitoring and Evaluation

Evaluation .....	24
Acceptable Use Policy .....	24

## Appendixes

A) Michigan Educational Technology Standards (METS) Checklist .....	25-37
B) Technology Support .....	38-39
C) Educational Technology Standards & Expectations.....	40-45
D) Code of Ethics .....	46-48
E) Internet Safety Policy.....	49
F) Current Software .....	50
G) Technology Survey .....	51-53

# **District Technology Committee**

Curt Babcock, Superintendent  
Steve Bliss, Trustee, Board of Education  
Donna Huryk, Elementary Technology Aide  
Andrew Porter, Technology Aide  
Sue Bergmans, Community Member  
Michael Belmonte, Director of Student Affairs  
Steve Sanocki, Elementary Principal  
James Russell, Elementary Teacher  
Brian Chandler, Elementary Teacher  
Heidi Sunderhaft, MS/HS Principal  
Joanna Berry, MS/HS Teacher  
Glenn Burek, MS/HS Teacher  
Joe Gentle, MS/HS Teacher  
Michael Schanhals, MS/HS Teacher  
Zach Fricke, MS/HS Teacher

# **NMPS TECHNOLOGY PLAN 2011**

## **Introduction**

### **MISSION**

The staff of the North Muskegon Public Schools, in partnership with parents and the community, will educate each student. Our mission is student mastery of skills to promote life-long learning and the development of positive self-esteem leading students to become productive, responsible citizens.

### **DEMOGRAPHICS**

North Muskegon Public Schools is housed within one school building and reported a total enrollment of 914 students for the February 2009 head count. North Muskegon Elementary School reported 435 students, the middle school has 212 students, and the high school has 267.

The school currently employs 27 Elementary teachers, 32 MS/HS teachers, and 14 paraprofessionals. The school also employs part time; one social worker, one speech and language therapist, and one psychologist.

North Muskegon residents have the highest median family income in the county as well as the highest educational attainment. Out of the 78 graduates of the class of 2011; four were exchange students. 94% of 2011 graduates enrolled in college, 3% entered missionary school, and 3% entered the workforce. The 2011 State of Michigan 4-year cohort graduation/drop out rate, for North Muskegon Schools was 98.77% graduating.

North Muskegon Public High School was reported and honored with a Silver Medal for school excellence as reported by the U.S. News & World Report in 2008. Annually the U.S News & World report in collaboration with School Evaluation Services, a K-12 education and data research and analysis business, provides parents with education data on schoolmatters.com. This data analyzed academic and enrollment data from more than 21,000 public high schools to find the very best across the country. These top schools were placed into gold, silver, bronze, or honorable mention categories.

# Vision and Goals

## VISION

It is our responsibility as an educational institution to help students use technology to prepare for productive citizenry in this global economy.

North Muskegon Public Schools will provide and integrate technology to enhance our educational mission for students, staff, and community members.

## GOALS

### Students

- Develop technology skills that are vitally important to lifelong learning and productivity in a global society.
- Develop understanding of the role technology plays in the future lives of students.
- Integrate technology skills across the curriculum to enhance communication and learning.
- Use appropriate technology to gather, process and present information to enhance critical thinking, decision making and creative expression.
- Apply ethical and legal standards in planning, using and evaluating technology.

### Staff

- Provide staff training to develop technology proficiencies to enhance teaching, learning and administrative functioning.
- Utilize technology resources effectively to help students achieve high academic standards.
- Utilize technology resources to gather and process student data to identify student achievement, strengths and weaknesses and improve the individualized education of the student body.
- Model appropriate and ethical usage of technology.

### Community

- Provide the community with increased access to technology resources.
- Leverage technology to enhance communication with parents and community.

### Infrastructure

- Increase access to technology for all students and staff.
- Provide adequate financial support for the maintenance, acquisition, upgrading and replacement of technology related hardware and software.
- Update infrastructure and networks as new technology emerges.
- Investigate and employ new technologies to improve teaching, learning and management processes.

# CURRICULUM

## Curriculum Integration

North Muskegon Public Schools is committed to the seamless integration of technologies into the daily flow of teaching and learning by providing a technology-enriched environment for the purpose of extending human capabilities.

The Michigan Educational Technology Standards and Benchmarks (METS) along with the National Educational Technology Standards (ISTE) guide curriculum integration at North Muskegon Public Schools.

Curriculum Integration Goals and Strategies include:

- Technology to improve student academic achievement will be readily available to *all* staff and students K-12.
- Teachers will be surveyed on a regular basis to help guide technology-related professional development.
- Technology-related professional development will include classroom integration components.
- New-teacher orientation will include technology integration training.
- The District Technology Committee will meet regularly to assess current levels of technology integration and offer strategies for increased integration.
- The district will meet all technology standards through the integration of technology into the curriculum.

Appendix A indicates how the district implements each METS standard.

## Student Achievement

Following is a list of some of the ways the district is using technology to improve and measure student achievement.

- Computers employed at all levels to enhance and improve the core curriculum.
- Biology taught entirely on-line with lessons and assignments delivered through the Moodle, an Online Curriculum Management System.
- AP Biology taught using on line text and CD support.
- World Wide Web used in most classes for research.
- The Microsoft Office Suite will be used to create and present student projects.
- Compass Learning Odyssey program used to supplement classroom instruction and assess student progress.
- Accelerated Reader used to encourage and track reading in the elementary school.
- Virtual University Courses are available.

The following timeline, which is based on the curriculum checklist found in Appendix A, outlines how the district plans to achieve the full integration of technology into the curriculum to improve student achievement in all curricular areas.

The implementation of this plan is heavily dependent on professional development that focuses on the integration of technology into the curriculum.

## **Technology Integration Timeline**

Timeframe	Goals	Who
2012-2013	To improve student achievement, staff will be surveyed to determine their technology knowledge, skill level and to provide information about current available technology.	Technology Coordinator
	IGOR data warehousing will house student testing data and will be made available to the appropriate staff for review and assessment purposes.	IGOR training will be provided through the Muskegon Area Intermediate Tech Staff to the appropriate staff.
	Student grades and achievements will be tracked through Power School.	Technology Coordinator
	Overall student achievement will be enhanced through individualized extensive training of the teaching staff in the use of blogging, pod casting, Google Apps, iTunes, Photo-Story, Picasa, Audacity, and a variety of other tools and software.	Muskegon Area Intermediate School District – Multiple sessions.
On-going	Assess effectiveness of technology integration of student achievement in reading.	The educational teaching staff
	Student achievement will be addressed through the Response to Intervention training received by the staff.	The educational teaching staff, RTI Coordinator
On-going	Improve student achievement by using updated technology in the classroom. This would include projectors, document cameras, screens and updated computers and printers.	Technology Coordinator
On-going	Provide students with updated software for integration training and improved instructional methods.	Technology Coordinator
On-going	Provide vision and updated technology plans to meet the student needs in the future.	Technology Committee

## Technology Delivery

The students of North Muskegon Public Schools participate in courses that are delivered online and use technology tools to assist in the delivery of course content.

- All of the high school biology course content is delivered online through Moodle, our Online Curriculum Management System.
- The new Social Studies curriculum has CD and internet enhancements for instructional purposes.
- Psychology materials were purchases that included internet and CD learning materials.
- As materials become outdated updated curriculum materials and textbooks will have CD and internet options.
- Students will be able to download e-books for MP3 players.
- High school students take on-line courses through the Michigan Virtual High School.
- Teachers make use of United Streaming videos for classroom instruction.
- North Muskegon Public Schools participates in a county wide fiber system.
- The MAISD has a new online video library available for both staff and students.

Technology already has enhanced and extended the possibilities for student learning outside the classroom, and new technologies will only push the boundaries further. Strategies to enhance instruction and increase student achievement through the use of distant resources include:

- Continue the use of Discover Education videos for classroom instruction as well as other new on-line resources.
- Actively pursuing distance learning through video conferencing with other schools across the county via the fiber project, including Virtual University and course offerings through Muskegon Community College.
- Offer Microsoft Office training for independent study students.

It is the responsibility of the district and the technology committee to continue the research of emerging technologies that will further enhance the learning opportunities of its students and plan for their implementation.

## Parental Communications & Community Relations

North Muskegon Public Schools values involvement from the parents of its students as well as all members of the school community. To inform parents and the community of this technology plan and to solicit input concerning curriculum needs and implementation of this Technology Plan, the following are current and planned strategies to be taken:

- Review the Technology Plan annually with the Board of Education.
- Review the Technology Plan annually with the School Improvement Committee.
- Post the technology plan on the district web site: <http://www.nmps.k12.mi.us>.
- Provide printed copies of the Technology Plan upon request.
- Advertise in school publications; Friday Flyer, Norse News, and the Bellringer, that the Technology Plan is available on-line and in print.



- Publish technology–related news, updates, and current events in school publications and the district web site.
- Summarize technology committee meeting minutes, actions, and plans at regular DK-12 staff meetings.
- Offer access and training for online student grade reports.
- Encourage parent and community representation on the North Muskegon Technology Committee, including representation from the Parent Teacher Association and other parent groups.
- Continue to provide all teachers phones equipped with voice mail in their classrooms and E-mail accounts.
- Promote the use of published web pages and blogs posted by teachers on the North Muskegon Schools website.
- Create an online technology suggestion form.

## Collaboration

North Muskegon Public Schools collaborates with White Lake Area Community Education Consortium as our adult literacy service provider. Adult non-graduates and GED holders can enroll in the following programs:

- Adult high school completion
- Adult Basic Education (ABE)
- G.E.D. preparation
- English as a Second Language (ESL)

North Muskegon Public Schools aims to meet the life-long learning needs of the North Muskegon residents. Working collaboratively with White Lake Area Community Education Consortium we are able to provide access to technology resources beyond the K-12 school day. More information is available at the White Lake Area Community Education website: [http://www.wlace.org/adult\\_education.htm](http://www.wlace.org/adult_education.htm)

White Lake Area Community Educational also offers various enrichment classes that can be accessed by our community at <http://www.wlace.org/enrichment.htm>.

A sampling of the current offerings in the Computers and Technology field are:

Digital Photography	Publications	Microsoft Office
Intro to Computers I	Intro to Computers II	Multimedia

In addition, North Muskegon Public Schools collaborates with community service agencies, municipalities, colleges, and businesses which provide programs and services designed to improve the quality of life in our community. It is the intent of North Muskegon Public Schools to provide opportunities for all community members to expand their knowledge and abilities in the use of technology.

# Professional Development

## Professional Development

To achieve its goal of integrating technology into all areas of the curriculum, North Muskegon Schools commits time and resources to:

- Provide access to the Michigan Educational Technology Standards (METS) and National standards.
- Provide opportunities for teachers and educational leaders to share ideas and approaches on how best to integrate technology into the curriculum according to the Michigan Educational Technology Standards (METS).
- Teach all staff to use technology effectively.
- Encourage staff to attend state/local technology conferences.
- Encourage staff to attend trainings available at the Muskegon Area Intermediate School District.
- More information about technology course offerings can be obtained at: <http://www.muskegonisd.org/adminservices/techservices/instruction/>
- Attend technology training including these suggested offerings:  
Wikipedia    Picasa    Goggle Apps    iTunes  
Photo-Story    Blogging    Moodle    Pod Casts    AdobePDF  
Integration online    Voicethread

### Planning for Professional Development

All North Muskegon Staff will annually:

- Complete a survey of their technology skills and assess their use of technology in instruction (Sample survey - Appendix G). The annual survey will be given in May of each year.
- Provide a year-end summary of their growth and student learning through technology (Appendix H). Results of the surveys will be used by the technology committee to plan in-services and aid teachers in developing individual technology goals.
- A three year time-line for Integrating and Improving Professional development can be found in Student Achievement - Section B.

### Professional Development Opportunities

All Staff will be provided opportunities for professional development to include:

- In-services provided by NM technology staff or MAISD staff during monthly DK-12 meetings, after school or during the summer.

- On-line training through such programs including: *MI Virtual University*  
Teach for Success - *Net Trekker* - Atomic Learning - *T.H.E. Institute*
- Through professional organizations and area ISD's.
- Workshops to give teachers the opportunity to learn and integrate technology tools and skills.
- Conferences such as MACUL to learn integration skills and application of the METS standards.
- At colleges and universities with reimbursement for course work taken to enhance computer/technology skills and curriculum integration.

## Supporting Resources

### Internal Resources

- Follett library circulation system in both media centers
- Access to E-mail and Files & Folders via the web
- Power School Grade Book system
- The North Muskegon Public School website at [www.nmps.k12.mi.us](http://www.nmps.k12.mi.us)
- Parent Internet Viewer system for accessing student attendance and grades
- Accelerated Reader software system
- Compass lessons in all core areas
- Microtype and Bernies Typing Tutorial
- Higher education involvement/support: NM is supportive of higher education by offering assistance to payment for credit, giving release time to take classes and workshops
- Video lending library
- Student NetBooks with a 1:1 initiative.

### External Resources

- CIMS student management system available through Muskegon Area Intermediate School District (MAISD).
- REMC statewide purchasing contract
- REMC4 advisory council & media services
- Annual MACUL conference and other technology conferences
- Virtual University
- Discovery Education
- MAISD Online Video Library

## **Printed Resources**

- Manuals for technology uses are located in the Technology Coordinator office

# **INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT AND SOFTWARE**

This section describes the existing and projected technology infrastructure of the district. It is divided into a number of categories from network cabling to computer workstations and software. Each section describes the existing infrastructure and the planned changes or additions for the duration of the 3-year plan.

As of the beginning of 2012, NMPS came to the end of technology bond. A new position was also created for a Technology Director.

## **Infrastructure Needs and Design**

### **Data Network**

The data network consists of cable and electronic devices that support the two-way transmission of data between the file servers and workstations.

#### **Existing Cable and Electronics**

Fiber optic cable home-runs extend from the main closet to 4 intermediate closets at 10Gbps with an additional 1Gbps backup run. The entire buildings copper infrastructure has been upgraded to category 6 cabling standard. Some category old 5E cable does still exist in the elementary school.

The main switch with the fiber links resides in the main closet. Switches with various configurations reside in each closet and connect to individual classrooms and offices. The main switch distributes data via fiber at a rate of 10 Gbps. Every switch on the network transfers data at a rate of 1Gbps.

There is also a wireless network consisting of 52 wireless access points and a wireless controller that supports wireless connections to computers throughout the district building.

### **Plan**

NMPS's current wiring/wireless infrastructure meets current bandwidth needs and is up-to-date on the newest wiring standards. There is no plan to upgrade the wiring/wireless infrastructure in the next 3 years.

## **Video Network**

### **Existing**

The video network is independent from the data and telephone network. The video network is used to distribute cable TV stations to classrooms.

During the spring of 2012, Charter Communications updated their source signal to all digital service. Without a digital tuner box, distributed TV service is no longer available.

### **Plan**

The current video network has lost functionality. The plan is to remove all VCR/DVD players from the TV and hook them up to the computer carts to each classrooms sound/projector system. Any other video distribution solutions should be considered to go over IP as our wired network can support the bandwidth.

## **Telephone System**

### **Existing**

During the 2010-2012 Technology Bond, NMPS joined the MAISD IP phone network through Sirius. Every phone in the district has been replaced with a new IP phone and includes voicemail.

### **Plan**

The new phone system is up-to-date.

## **Servers**

### **Existing**

All of NMPS servers have been migrated into a virtual cluster using VM Ware. We maintain two physical servers for Internet Filtering and management of the cluster. This allows us to share physical resources and split services to keep a cleaner organized server bank.

### **Plan**

NMPS will need to purchase additional physical resources to add to the cluster to make sure our server infrastructure continues to be robust with plenty of storage. This will include new servers and an additional SAN as the storage container is at 100% capacity.

## **Internet Access**

### **Existing**

Access to the Internet is provided for all students and staff for reference, research, and e-mail.

Every computer that is connected to the data network has a direct connection to the Internet. The district is connected to an area-wide fiber optic network that is maintained by the Muskegon Area Intermediate School District and has the potential to be scaled to the needs of the district. The line enters into our main closet and passes through the Cisco Pix firewall. All Internet traffic must also pass through the NetSweeper filter server. This server filters Internet content, attempting to only allow appropriate information through for student use.

### **Plan**

At this time all devices have high-speed Internet access. The MAISD monitors and maintains proper balance for us and also contracts e-rates services for Internet access.

## **Computer Systems**

### **Existing**

All teachers and members of office staff have desk top computers connected to the school network. All administrators have notebook computers that connect to the network. There are 3 permanent computer labs in the district—one in the elementary and two adjacent to the middle/high school media center. In addition, there are 6 portable carts—one in the elementary and 5 in the middle/high school. There are 14 mutli-point servers in the District which allow 6 computers stations hooked up to a single computer acting as mini-labs. During the 2010-2011 school year, NMPS also incorporated a 1:1 initiative in which we assign every high school student a personal netbook to use at school and home during the entire school year. One of the district's labs is a Mac lab. This lab is primarily used for publications/multi-media classes, but is available for other classes.

### **Plan**

The Netbook computers for the HS students were purchased with only a single gigabyte of memory. To make sure that we keep up with software demands and make the computers last longer we will be doubling the available amount of memory on these computers.

## **Printers**

### **Existing**

During the 2011-2012 school year we ran into lots of issues with our old black and white classroom printers. To remedy this NMPS contracted print services with Applied Imaging based out of Muskegon and did away with desktop printers. We added several copiers throughout the building to act as print hubs. While teachers lost access to having a printer at their desk, they gained the ability to send completed copy jobs from their desktops. This includes printing, duplexing, stapling, hole-punching, color, booklets, etc. On top of that, each copier has a scanner built into it with text recognition software built into the network.

### **Plan**

Our recent print contract brings our operating costs down from previous years as ink/labor is included in the contract. NMPS will work with Applied Imaging to make sure that all copiers continue to function properly and evaluate software updates available to make any improvements as they are released.

## **Data Projectors**

### **Existing**

All classrooms DK-12 are wired for ceiling-mounted data projectors. There is a ceiling-mounted data projector in every regular 4<sup>th</sup> grade, 5<sup>th</sup> grade, middle and high school classroom (except for 3 special education rooms in the middle and high schools). There are also portable data

projectors that are available to be checked out, four of which are equipped with VCR and DVD players.

**Plan**

There are no current replacement/upgrade currently.

## **Televisions**

**Existing**

A television is mounted in almost every permanent classroom and in each computer lab. There is a 36" television in each library. In addition there are televisions in the teacher's lounge, cafeteria, superintendent's office, principals' offices, counselor's office, and athletic offices.

**Plan**

With data projectors with video projection capabilities mounted in every classroom, TVs have become obsolete. Teachers prefer to project larger, more easily visible images with the data projectors vs. the TVs. Televisions, particularly those that are HD-ready, will continue to be useful in smaller settings, such as offices. However, the district should not invest additional dollars to replace TVs that breakdown in regular classrooms.

## **VCR/DVD Players**

**Existing**

Almost every classroom has a separate DVD/VCR player. These have been hooked up to every classrooms media cart to show on the projectors and audio systems.

**Plan**

There is no plan to remove these as VCRs and DVDs still exist throughout the school

## **Video Equipment**

**Existing**

The district owns digital cameras that are available for each every classroom to use. The high school also owns 3 digital video cameras and 3 digital photography classes for their yearbook/publishing class.

**Plan**

The district needs to continue to budget to repair or replace video equipment. The 3 digital cameras use MiniDV tapes which is a constant expense and a troublesome technology. The district should be replacing these for the next school year.

The Technology Committee should evaluate annually whether the supply of video cameras is sufficient to meet needs and recommend accordingly.

As recommended earlier, if there is a need to broadcast video within the school building, an alternative to the video network and broadcast carts should be found.

## **Video Conferencing Equipment**

### **Existing**

None.

### **Plan**

With the completion of the countywide fiber optic project, there will be increased opportunities to use video conferencing equipment for student courses, staff training, and communication from a classroom in the district to another classroom outside of the district. The district should consider acquiring the necessary equipment to conduct video conferencing as programs become available through the fiber optic network.

## **Library Automation**

### **Existing**

In 2003, the district purchased the Follett program to automate both the elementary and Middle/High media center resources. During the 2004-2005 school year, the Follett database was populated with all of the holdings of both media centers. As new books are acquired, they are entered into the system.

### **Plan**

The current software is out-of-date and the district should consider moving to an updated online version of Follett.

## **Typical Classroom Configuration**

### **Existing**

*Each regular classroom grades k-3 is configured as follows:*

- 2 or 3 network data jacks
- 2 video network jacks (1 high for the TV, 1 low for video input)
- TV
- 1 teacher networked workstation
- 1 document camera
- Mounted data projector
- Lightspeed sound system with 2 microphones



- Mobi Bluetooth interactive whiteboard
- Telephone

### **Plan**

Each classroom was equipped with a new computer, document camera, digital camera, sound system, data projector, and a mobile interactive whiteboard. All hardware has a 3-5 year warranty. There is no need to review this hardware at this time.

## **Flex Lab Technology**

### **Existing**

The technology in Flex Center is designed to support large group presentations and performances. The room contains a high-tech podium that coordinates the use of various media sources, including DVD, VCR, voice, document camera and computer. The podium also controls the ceiling-mounted projector, the window curtains and the screen. The Flex Center contains a built-in sound and light control center with various pieces of equipment and controls. In 2009 a new microphone system was installed.

### **Plan**

The Flex Center's use has increased throughout the years. As our programs grow, so should the districts available technology to enhance the visual/audio aspects. A new light board is needed to enhance controls. A DMX lighting network needs to be created to allow for new LED lights that would be purchased in the future. Additional cabling, microphones, lights & tools can always be used to improve this theatre's availability.

## **Video Surveillance System**

### **Existing**

During the last bond the district replaced all cameras to an IP solution and put in a new recording server. There are still a few 'dead spots' in the district in which the cameras cannot see.

### **Plan**

Additional cameras should be put in place to cover our dead spots. The software used from Panasonic is cumbersome to use. The audio recording on the camera's is pretty good, but the software availability is buggy and the company that installed has not been able to come up with a solution. Due to the cost of changing the district will not make any major changes unless we pass another bond.

## **Software**

### **Existing**

The district standardized on the Microsoft Windows platform many years ago. Every computer on the school network uses Microsoft Windows 7 & Office 2010. In addition, all servers run Server 2010 Data Center on a full VM Ware cluster solution.

Numerous software packages are available on school computers to support curricular and management functions. Refer to Appendix F for a complete listing of district software.

### **Plan**

The district will meet regularly for additional software to be used in labs, classrooms and the netbooks to enhance the technology in the classroom and prepare students for a digital world.

## **Technical Support**

The district employs a full-time technology director, and two part-time technology aides, and budgets \$5000 for additional technology support. Within their knowledge and capabilities, school technology personnel resolve most technical difficulties with both hardware and software. If the technical staff cannot resolve a problem, then outside sources are brought in such as NextIT or MAISD personnel.

Please refer to Appendix B for lists of technology support responsibilities.

### **Recommendations**

The current support level is sufficient for the equipment that the district owns.

## **Increase Access**

All administrators, teachers and students at North Muskegon Schools have access to technology.

Elementary students can access individual computers in a number of ways:

- Each elementary class has weekly scheduled times in the computer lab.
- Portable labs for grades 4-5 may be checked out and used in the classroom or media center.
- Each dk-2 has a multipoint server that can host 5 users at a time.
- The elementary media center has a bank of 5 computers for work on Accelerated Reader tests, or for individual work by teachers and support staff.

Middle and High school students have access to Middle/High School Computer Lab A and Computer Lab B, both adjacent to the Middle/High School Media Center, when they are not used by computer related classes such as Computer Applications and Yearbook. In addition, a portable cart of netbook computers that may be checked out by a teacher for group work in a classroom or in the media center for grades 6-8. Every single high school student has a personal netbook assigned to them.

Computers are also available in the Middle/High School Media Center. Students have monitored access to these computers 15 minutes before school starts and 45 minutes after the end of school in addition to on their lunch hours for additional support.

Each special education classroom has a multipoint server that supports 6 users.

Parents are being encouraged to access the district technology through the use of telephone, voice mail, email, and to use the website, blogs, and grade reports. The Districts promotes parent education through the White Lake Area Community Education Consortium and the North Muskegon Public Library computer access which is located next to the school and open to the public daily.

## **Assistive Technology**

For those students with special, individual needs, assistive technology is sometimes purchased by the Northern Service Unit or loaned to the district by the Muskegon Area Intermediate School District.

Below are lists of computer programs that are used in the Special Education Department to assist students with disabilities. Training on the use of this software is available from the MAISD to all staff members.

### **Assistive Software for Reading**

- Premiere Assistive Technology tools available on each student computer
- Talking Spell Checkers (Franklin Spellers).
- Word processors with text to speech capabilities (*Write: Out Loud* by Don Johnson).
- Books published in CD-ROM format and books accompanied by audiotapes.
- *Inspiration*.
- *Kidspiration* (grades 1-3).
- *Symbols 2000* by Mayer Johnson (pictures accompany each word as it is typed).

Compass Integrated Learning system which tests students, then assigns individualized reading and grammar activities

- Amplifications Systems, Projectors, Mobi Boards, Document Camera's,

### **Assistive Technology for Math**

- On screen calculators (Riverdeep)
- Intellikeys software.
- Compass Integrated Learning System for testing and individualized assignments.

### **Other Program Options**

- Edmark Reading Program, an individualized sight word program by Riverdeep.
- Five finger typist.

# Funding and Budget

## Budget and Timetable

The following table outlines the North Muskegon Public Schools budget for projected technology expenditures.

Item	Funding Source	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Technology Coordinator Salary	General Fund	18,000	25,800	51,000	51,000	51,000
Technology Aide Pay	General Fund	24,900	28,000	28,411	28,411	28,411
Technology Staff Benefits	General Fund	10,725	19,566	26,205	28,701	31,000
Technology Staff Insurance	General Fund	6,500	6,600	8,817	6,000	6,100
Website Contractor	General Fund	3,000	3,100	3,000	2,000	2,000
Technology Support Contractors	General Fund	1,000	1,000	3,000	2,000	2,000
Network Support - NEXT IT	General Fund	18,500	18,500	10,000	10,000	10,000
Internet Services - MERIT	General Fund	4,600	4,800	6,000	6,000	6,000
Technology Services - MAISD Data	General Fund	9,800	1,000	19,350	19,350	19,350
Telephone Services/Cell phone	General Fund	15,000	1,000	1,000	1,000	1,000
E-Rate Services	General Fund	980	375	200	200	200
Fiber Project	General Fund	5,200	5,200	5,200	5,200	5,200
Compass Learning Upgrades - HS	General Fund	0	0	0	0	0
Virtual University	General Fund	6,800	9,265	30,000	30,000	35,000
Credit recovery - on line	General Fund	1,000	1,000	1,000	1,000	1,000
Excelsior Upgrade/Maintenance	General Fund	3,307	0	0	0	0
Technology Supplies	General Fund	6,500	8,000	8,000	8,000	8,000
Technology Training	General Fund	3,000	3,000	2,000	2,000	2,000
Accounting software upgrade	General Fund	11,000	12,300	20,000	20,000	20,000
Equipment - Title	Title Funds	6,400	6,400	0	0	0
Equipment - IDEA	IDEA	6,400	6,400	0	0	0
Equipment - General Fund	General Fund	9,000	9,500	9,000	9,000	9,000
Flex lab support	General Fund	1,466	1,572	1,000	1,000	1,000
<b>Totals</b>		<b>173,078</b>	<b>172,378</b>	<b>233,183</b>	<b>230,862</b>	<b>238,261</b>

## Coordination of Resources

Certain categories of expense can be covered by the general fund such as district technology staff salaries and benefits, network support, Internet service, telephone service, fiber project charges, professional development, some software upgrades, and technology supplies.

The district will continue to seek sources of funding for technology, including the Universal Service Fund and Federal grants. Significant technology acquisitions or upgrades will most likely require new bond projects.

# **Monitoring and Evaluation**

## **Evaluation**

The district technology committee will evaluate progress in meeting the goals of the technology plan through an annual survey. The district will evaluate both teacher and student progress in meeting the educational technology standards and expectations (see Appendix C). Teachers may use the assessment checklists to ensure mastery of appropriate skills.

If pre-set goals are not attained, the technology committee will recommend measures to close the gap between the goals and the actual progress made toward achieving those goals. Curriculum will drive the use of technology for teachers and students. The curricular deficiencies will be identified first and then the technology to be used by teachers and students will be identified. It should be noted that technology is also accessed and evaluated through the requirements of Michigan School Process Rubrics and the School Data Profile/Analysis, P.A. 25 and 339 (School Improvement).

Teachers design and implement technology through curriculum planning, instructional delivery, and through the use of computer-based assessments. Teachers are also evaluated by the administrators on technology integration. Unmet goals can be addressed in a teachers individual development plan (IDP). All staff will be invited to attend the Integrating Technology into the Classroom classes as provided by the MAISD.

This technology plan expires in June of 2015. Prior to the expiration date, the technology committee will conduct a thorough review of the plan and rewrite, add and remove sections as necessary to reflect the current technological state and needs of the district.

## **Acceptable Use Policy**

Each student, parent, and staff member completes the Acceptable Use of Technology Agreement each year. The agreement highlights acceptable use and disciplinary steps as necessary (see Appendix D). The board of education adopted a Children Internet Protection Act policy that can be found in Appendix E. North Muskegon uses a compliant server by NetSweeper for filtering out Internet content that is inappropriate for school use. The board adopted the Cyber Bulling Policy into effect in the 2009-2010 school year.

# METS - Appendix A

## Michigan Educational Technology Standards (METS) - K-12 Checklist by Grade Levels

<b>O</b> = Teacher Observation	<b>P</b> = Portfolio Evidence	<b>A</b> = Formal Assessment	<b>C</b> = Technology Literacy Class			
<b>Grades K through 2 – Technology Standards and Expectations – (by the end of Grade 2)</b>						
<b>1. Basic Operations and Concepts.</b>						
<b>a. Students demonstrate a sound understanding of the nature and operation of technology systems.</b>				<b>K</b>	<b>1</b>	<b>2</b>
1. Students understand that people use many types of technologies in their daily lives (e.g., computers, cameras, audio/video players, phones, televisions).				O	O	O
2. Students identify common uses of technology found in daily life.				O	O	O
3. Students recognize, name, and label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, and printer).						
4. Students identify the functions of the major hardware components in a computer system.						
5. Students discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes).						
6. Students proofread and edit their writing using appropriate resources including dictionaries and a class developed checklist both individually and as a group.						
<b>b. Students are proficient in the use of technology.</b>				<b>K</b>	<b>1</b>	<b>2</b>
1. Students use various age-appropriate technologies for gathering information (e.g., dictionaries, encyclopedias, audio/video players, phones, web resources).						
2. Students use a variety of age-appropriate technologies for sharing information (e.g., drawing a picture, writing a story).				O	O, C	O, C
3. Students recognize the functions of basic file menu commands (e.g., new, open, close, save, print).						O
<b>2. Social, ethical, and human issues.</b>						
<b>a. Students understand the ethical, cultural, and societal issues related to technology.</b>				<b>K</b>	<b>1</b>	<b>2</b>
1. Students identify common uses of information and communication technologies.				O	O	O
2. Students discuss advantages and disadvantages of using technology.						
<b>b. Students practice responsible use of technology systems, information, and software.</b>				<b>K</b>	<b>1</b>	<b>2</b>
1. Students recognize that using a password helps protect the privacy of information.						
2. Students discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 911, internet, email) at home or at school.				O	O	O
3. Students discuss the consequences of irresponsible uses of technology resources at home or at school.				O	O	O
<b>c. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.</b>				<b>K</b>	<b>1</b>	<b>2</b>
1. Students understand that technology is a tool to help them complete a task.					O	O
2. Students understand that technology is a source of information, learning and entertainment.				O	O	O
3. Students can identify places in the community where one can access technology.						

## Michigan Educational Technology Standards (METS) – K – 2<sup>nd</sup> Checklist

<b>O</b> = Teacher Observation	<b>P</b> = Portfolio Evidence	<b>A</b> = Formal Assessment	<b>C</b> = Technology Literacy Class	
<b>3. Technology productivity tools.</b>				
<b>a. Students use technology tools to enhance learning, increase productivity, and promote creativity.</b>			<b>K</b>	<b>1</b>
1. Students know how to use a variety of productivity software (e.g., word processors, drawing tools, presentation software) to convey ideas and illustrate concepts.				O, C
2. 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).				O, C
<b>b. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.</b>			<b>K</b>	<b>1</b>
1. 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.				O, C
<b>4. Technology communications tools</b>				
<b>a. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.</b>			<b>K</b>	<b>1</b>
1. Students will identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teachers, parents, or student partners.			O	O
<b>b. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.</b>			<b>K</b>	<b>1</b>
1. Students know how to use age-appropriate media (e.g., presentation software, newsletters, word processors) to communicate ideas to classmates, families, and others.				O
2. 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.			O	O, C
<b>5. Technology research tools</b>				
<b>a. Students use technology to locate, evaluate, and collect information from a variety of sources.</b>			<b>K</b>	<b>1</b>
1. Students know how to recognize the Web browser and associate it with accessing resources on the internet.				2
2. Students will use a variety of technology resources (e.g., CD-ROMs, DVDs, search engines, websites) to locate or collect.				
<b>b. Students use technology tools to process data and report results.</b>			<b>K</b>	<b>1</b>
1. Students will interpret simple information from existing age-appropriate electronic databases (e.g., dictionaries, encyclopedias, spreadsheets) with assistance from teachers, parents, or student partners.				O
<b>c. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.</b>			<b>K</b>	<b>1</b>
1. Students can provide a rationale for choosing one type of technology over another for completing a specific task.				2
<b>6. Technology problem-solving and decision-making tools</b>				
<b>a. Students use technology resources for solving problems and making informed decisions.</b>			<b>K</b>	<b>1</b>
1. Students discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems.				2
<b>b. Students employ technology in the development of strategies for solving problems in the real world.</b>			<b>K</b>	<b>1</b>
1. Students identify ways that technology has been used to address real-world problems (personal or community).				2

## Michigan Educational Technology Standards (METS) - 3<sup>rd</sup> to 5<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal Assessment

**C** = Technology Literacy  
Class

### Grades Three through Five – Technology Standards and Expectations – (by the end of Grade 5)

#### 1. Basic Operations and Concepts.

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

	3	4	5
1. Students discuss ways technology has changed life at school and at home.		O	O
2. Students discuss ways technology has changed business and government over the years.		O	O
3. 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.	O	O	O

1. Students discuss ways technology has changed life at school and at home.
2. Students discuss ways technology has changed business and government over the years.
3. 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.

##### b. Students are proficient in the use of technology.

	3	4	5
1. Students know how to use basic input/output devices and other peripherals (e.g., scanners, digital cameras, video projectors).			
2. Students know proper keyboarding positions and touch-typing techniques.	A	A	A
3. Students manage and maintain files on a hard drive or the network.	C	C	C
4. Students demonstrate proper care in the use of hardware, software, peripherals, and storage media.	O	O	O
5. Students know how to exchange files with other students using technology (e.g., e-mail attachments, network file sharing, diskettes, flash drives).	O	O	C
6. Students identify which types of software can be used most effectively for different types of data, for different information needs, or for conveying results to different audiences.	O	O	C
7. Students identify search strategies for locating needed information on the internet.	O	O	O
8. 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.	A	A	A

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



## Michigan Educational Technology Standards (METS) - 3<sup>rd</sup> to 5<sup>th</sup> Checklist

**O** = Teacher Observation      **P** = Portfolio Evidence      **A** = Formal Assessment      **C** = Technology Literacy Class

2. Social, ethical, and human issues.		3	4	5
<b>a. Students understand the ethical, cultural, and societal issues related to technology.</b>		<b>3</b>	<b>4</b>	<b>5</b>
1.	Students identify cultural and societal issues relating to technology.	O	O	O
2.	Students discuss how information and communication technology supports collaboration, productivity, and lifelong learning.			
3.	Students discuss how various assistive technologies can benefit individuals with disabilities.	O	O	O
4.	Students discuss the accuracy, relevance, appropriateness, and bias of electronic information sources.			C
<b>b. Students practice responsible use of technology systems, information, and software.</b>		<b>3</b>	<b>4</b>	<b>5</b>
1.	Students 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.	O	O	O
2.	Students discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, plagiarism) and related laws.		O	O
3.	Students use age-appropriate citing of sources for electronic reports.			A
4.	Students identify appropriate kinds of information that should be shared in public chat rooms.	O	O	O
5.	Students identify safety precautions that should be taken while on-line.		O	O
<b>2c. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.</b>		<b>3</b>	<b>4</b>	<b>5</b>
1.	Students explore various technology resources that could assist them in pursuing personal goals.			
2.	Students identify technology resources and describe how those resources improve the ability to communicate, increase productivity, or help them achieve personal goals.			
3. Technology productivity tools.		<b>3</b>	<b>4</b>	<b>5</b>
<b>a. Students use technology tools to enhance learning, increase productivity, and promote creativity.</b>		<b>3</b>	<b>4</b>	<b>5</b>
1.	Students know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker).	O	O,P	O,P
2.	Students know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents.		A	A
3.	Students use a variety of technology tools and applications to promote [their] creativity.	O	A	A
4.	Students understand that existing (and future) technologies are the result of human creativity.	O	O	O

## Michigan Educational Technology Standards (METS) – 3<sup>rd</sup> to 5<sup>th</sup> Checklist

<b>O</b> = Teacher Observation	<b>P</b> = Portfolio Evidence	<b>A</b> = Formal Assessment	<b>C</b> = Technology Literacy Class		
<b>b. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. Students collaborate with classmates using a variety of technology tools to plan, organize, and create a group project.					
<b>4. Technology communications tools</b>					
<b>a. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. Students use basic telecommunication tools (e.g., e-mail, WebQuests, IM, blogs, chat rooms, web conferencing) for collaborative projects with other students.					
<b>b. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. 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.				A	A
2. 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).					
<b>5. Technology research tools</b>					
<b>a. Students use technology to locate, evaluate, and collect information from a variety of sources.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. Students use Web search engines and built-in search functions of other various resources to locate information.			O	O	O, C
2. Students describe basic guidelines for determining the validity of information accessed from various sources (e.g., web site, dictionary, on-line newspaper, CD-ROM).					
<b>b. Students use technology tools to process data and report results.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. 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.					O
2. Students perform simple queries on existing databases and report results on an assigned topic.					
<b>5c. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. Students identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource.					
2. Students compare and contrast the functions and capabilities of the word processor, database, and spreadsheet for gathering data, processing data, performing calculations, and reporting results.					
<b>6. Technology problem-solving and decision-making tools</b>					
<b>a. Students use technology resources for solving problems and making informed decisions.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. 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).					
<b>b. Students employ technology in the development of strategies for solving problems in the real world.</b>			<b>3</b>	<b>4</b>	<b>5</b>
1. 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).					

## Michigan Educational Technology Standards (METS) - 6<sup>th</sup> to 8<sup>th</sup> Checklist

**O** = Teacher Observation      **P** = Portfolio Evidence      **A** = Formal Assessment      **C** = Technology Literacy Class

### Grades Six through Eight – Technology Standards and Expectations – (by the end of Grade 8)

1. Basic Operations and Concepts.	6	7	8
<b>a. Students demonstrate a sound understanding of the nature and operation of technology systems.</b>			
1. Students understand that new technology tools can be developed to do what could not be done without the use of technology.	O	O	O
2. Students describe strategies for identifying, and preventing routine hardware and software problems that may occur during everyday technology use.			
3. Students identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses).			
4. Students discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving.	O	O	O
5. Students identify characteristics that suggest that the computer system hardware or software might need to be upgraded.	O	O	O
<b>b. Students are proficient in the use of technology.</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Students use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer.	O	O	O
2. Students use accurate technology terminology.	O	O	O
3. Students use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products.	O	O	O
4. Students 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.	O	O	O
5. Students identify technology resources that assist with various consumer related activities (e.g., budgets, purchases, banking transactions, product descriptions).			
6. Students can identify appropriate file formats for a variety of applications.	O	O	O
7. Students can use basic utility programs or built-in application functions to convert file formats.			
8. Students proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, and writing references) and grade level appropriate checklists both individually and in groups.	O	P	A

## Michigan Educational Technology Standards (METS) - 6<sup>th</sup> to 8<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal Assessment

**C** = Technology Literacy  
Class

2. Social, ethical, and human issues.

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

**6    7    8**

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

O    O    O

2. Students identify security issues related to e-commerce.

3. Students describe possible consequences and costs related to unethical use of information and communication technologies.

4. Students discuss the societal impact of technology in the future.

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

**6    7    8**

1. Students provide accurate citations when referencing information from outside sources in electronic reports.

O    O    A

2. Students discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, spam, viruses, file-sharing).

O    O    A

**2c. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.**

**6    7    8**

1. Students use technology to identify and explore various occupations or careers.

2. Students discuss uses of technology (present and future) to support personal pursuits and lifelong learning.

O    O    O

3. Students identify uses of technology to support communication with peers, family, or school personnel.

O    O    O

3. Technology productivity tools.

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

**6    7    8**

1. Students apply common software features (e.g., thesaurus, formulas, charts, graphics, sounds) to enhance communication and to support creativity.

A    A    A

2. Students use a variety of resources, including the internet, to increase learning and productivity.

A    A    A

3. Students explore basic applications that promote creativity (e.g., graphics, presentation, photo-editing, programming, video-editing).

A    A    A

4. Students use available utilities for editing pictures, images, or charts.

A    A    A

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

**6    7    8**

1. Students use collaborative tools to design, develop, and enhance materials, publications, or presentations.

A    A    A

**4. Technology communications tools**

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

**6    7    8**

1. Students 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.

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

1. Students 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.

A    A    A

## Michigan Educational Technology Standards (METS) – 6<sup>th</sup> to 8<sup>th</sup> Checklist

<b>O</b> = Teacher Observation	<b>P</b> = Portfolio Evidence	<b>A</b> = Formal Assessment	<b>C</b> = Technology Literacy Class		
<b>5. Technology research tools</b>			<b>6</b>	<b>7</b>	<b>8</b>
<b>a. Students use technology to locate, evaluate, and collect information from a variety of sources.</b>					
1. Students use a variety of Web search engines to locate information.			O	O	O
2. Students evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness.			O	O	A
3. Students can identify types of internet sites based on their domain names (e.g., edu, com, org, gov, au).			O	O	O
<b>b. Students use technology tools to process data and report results.</b>			<b>6</b>	<b>7</b>	<b>8</b>
1. Students know how to create and populate a database.					
2. Students can perform queries on existing databases.					
3. Students know how to create and modify a simple database report.					
<b>c. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.</b>			<b>6</b>	<b>7</b>	<b>8</b>
1. Students evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task.					
<b>6. Technology problem-solving and decision-making tools</b>			<b>6</b>	<b>7</b>	<b>8</b>
<b>a. Students use technology resources for solving problems and making informed decisions.</b>					
1. Students use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist them with solving a basic problem.				A	A
<b>b. Students employ technology in the development of strategies for solving problems in the real world.</b>			<b>6</b>	<b>7</b>	<b>8</b>
1. Students describe the information and communication technology tools to use for collecting information from different sources, analyze their findings, and draw conclusions for addressing real-world problems.			O	O	A

## Michigan Educational Technology Standards (METS) - 9<sup>th</sup> to 12<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal Assessment

**C** = Technology Literacy  
Class

### Grades Nine through Twelve – Technology Standards and Expectations – (by the end of Grade 12)

#### 1. Basic Operations and Concepts

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

	9	10	11	12	HS
1. Students discuss emerging technology resources (e.g., podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, global positioning software).		A	A	A	A – Web Design A – Math Classes
2. Students identify the capabilities and limitations of emerging communication resources.					O – Web Design
3. Students understand the importance of both the predictable and unpredictable impacts of technology.					O – Web Design
4. Students identify changes in hardware and software systems over time and discuss how these changes might affect them personally in their role as a lifelong learner.					O – Web Design O – Introduction to computers
5. Students understand the purpose, scope, and use of assistive technology.	O	O	O	O	O – Web Design
6. Students understand that access to online learning increases educational and workplace opportunities.	O	O	O	O	

## Michigan Educational Technology Standards (METS) - 9<sup>th</sup> to 12<sup>th</sup> Checklist

<b>O</b> = Teacher Observation	<b>P</b> = Portfolio Evidence	<b>A</b> = Formal Assessment		<b>C</b> = Technology Literacy Class		
<b>1b. Students are proficient in the use of technology.</b>						
		<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	
	1. Students will be provided with the opportunity to learn in a virtual environment as a strategy to build 21 <sup>st</sup> century learning skills.					A – Virtual University classes
	2. Students understand the relationship between electronic resources, infrastructure, and connectivity.					A – Web Design CA – Intro to Computers
	3. Students will routinely apply touch-typing techniques with advanced accuracy, speed, and efficiency.					
	4. Students assess and solve hardware and software problems by using online help or other user documentation and support.					O – Web Design O – Computer Applic., Journalism, Publications
	5. Students identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav).					A – Web Design
	6. Students demonstrate how to import/export text, graphics, or audio files.	O	O	O	O	A – Web Design
	7. Students proofread and edit a document using an application’s spelling and grammar checking functions.	A	A	A	A	
<b>2. Social, ethical, and human issues</b>						
<b>a. Students understand the ethical, cultural, and societal issues related to technology.</b>						
	1. Students identify legal and ethical issues related to use of information and communication technology.	A	A	A	A	CO – Intro to Computers
	2. Students analyze current trends in information and communication technology and assess the potential of emerging technologies for ethical and unethical uses.				O	O – Web Design O – English 12
	3. Students discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society.					CA – Computer Applications
	4. Students discuss the possible consequences and costs of unethical uses of information and computer technology.				O	CA – Computer Appl. O – English 12

## Michigan Educational Technology Standards (METS) - 9<sup>th</sup> to 12<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal Assessment

**C** = Technology Literacy Class

2. Social, ethical, and human issues b. Students practice responsible use of technology systems, information, and software.	9	10	11	12	HS
1. Students identify ways that individuals can protect their technology systems from unethical or unscrupulous users.					CO - Computers
2. Students demonstrate the ethical use of technology as a digital citizen and lifelong learner.	O	O	O	O	
3. Students explain the differences between freeware, shareware, and commercial software.					O – Web Design
4. Students adhere to fair use and copyright guidelines.	O	O	O	O	O – Web Design
5. Students create appropriate citations for resources when presenting research findings.	A	A	A	A	
6. Students adhere to the district acceptable use policy as well as state and federal laws.	O	O	O	O	

2c. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.	9	10	11	12	
1. Students explore career opportunities and identify their related technology skill requirements.	A	A	A	A	
2. Students design and implement a personal learning plan that includes technology to support his/her lifelong learning goals.	A	A	A	A	
3. Technology productivity tools a. Students use technology tools to enhance learning, increase productivity, and promote creativity.	9	10	11	12	
1. Students complete at least one online credit, or non-credit, course or online learning experience.		A			A – Virtual University Classes
2. Students use technology tools for managing and communicating personal information (e.g., finances, contact information, schedules, purchases, correspondence).					
3. Students have access to and utilize assistive technology tools.	O	O	O	O	
4. Students apply advanced software features such as an application’s built-in thesaurus, templates, and styles to improve the appearance of word processing documents, spreadsheets, and presentations.	O	O	O	A	CA – Intro to Computers A – Web Design
5. Students use an online tutorial and discuss the benefits and disadvantages of this method of learning.					CO – Computer Apps C – Web Design
6. Students develop a document or file for inclusion into a web site or web page.					A – Web Design



## Michigan Educational Technology Standards (METS) - 9<sup>th</sup> to 12<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal Assessment

**C** = Technology Literacy Class

3. Technology productivity tools	9	10	11	12	
<b>a. Students use technology tools to enhance learning, increase productivity, and promote creativity.</b>					
7. Students use a variety of applications to plan, create, and edit a multimedia product (e.g., model, webcast, presentation, publication, or other creative work).		A		A	CA – Intro to Computers A - CAD A – Web Design
8. Students have the opportunity to participate in real-life experiences associated with technology-related careers.					A – Web Design 2 A - Journalism
<b>b. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.</b>	9	10	11	12	
1. Students identify technology tools (e.g., authoring tools or other hardware and software resources) that could be used to create a group project.					O - AP Eng, Communication, Yearbook, Journalism
<b>4. Technology communications tools</b>	9	10	11	12	HS
<b>a. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.</b>					
1. Students identify and describe various telecommunications or online technologies (e.g., desktop conferencing, listservs, blogs, virtual reality).		A	A	O	A - French A – AP English
2. Students use available technologies (e.g., desktop conferencing, e-mail, groupware, instant-messaging) to communicate with others on a class assignment or project.			A	A	O – AP Literature
3. Students 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.	A	A	A	A	A – Most classes
<b>4. Technology communications tools</b>	9	10	11	12	HS
<b>a. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.</b>					
4. Students plan and implement a collaborative project using telecommunications tools (e.g., groupware, interactive web sites, videoconferencing).					
<b>b. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.</b>	9	10	11	12	
1. Students 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.					A – Web Design, Communication, Yearbook, Journalism

## Michigan Educational Technology Standards (METS) - 9<sup>th</sup> to 12<sup>th</sup> Checklist

**O** = Teacher Observation

**P** = Portfolio Evidence

**A** = Formal  
Assessment

**C** = Technology Literacy  
Class

### 5. Technology research tools

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

	9	10	11	12	
1. Students compare, evaluate, and select appropriate internet search engines to locate information.	O	O	O	O	CA – Intro to Computers A – Web Design
2. Students determine if online sources are authoritative, valid, reliable, relevant, and comprehensive.				A	CA – Computer Applications
3. Students distinguish between fact, opinion, point of view, and inference.				A	A – Computer Applications
4. Students evaluate resources for stereotyping, prejudice, and misrepresentation.				A	A – Web Design

#### b. Students use technology tools to process data and report results.

	9	10	11	12	
1. Students formulate and use evaluation criteria (authority, accuracy, relevancy, timeliness) for information located on the internet to present research findings.		A			CA – Computer Applications A - Yearbook, Communications, Journalism, Argument & Research

#### 5c. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

	9	10	11	12	
1. Students develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys).					A - Psychology

#### 6. Technology problem-solving and decision-making tools

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

	9	10	11	12	
1. Students use a variety of technology resources (e.g., educational software, simulations, models) for problem solving and independent learning.					A - CAD
2. Students describe the possible integration of two or more information and communication technology tools or resources to collaborate with peers, community members, and field experts.			O	O	A - AP English Literature

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

	9	10	11	12	
2. Students formulate a research question or hypothesis, then use appropriate information and communication technology resources to collect relevant information, analyze the findings, and report the results to multiple audiences.	A	A	A	A	A – English, Biology, Ecology

# Appendix B - Technology Support Responsibilities

## Technology Director responsibilities

- Direct and monitor work of technology aides
- Solicit assistance from the MAISD when needed
- Evaluate and order equipment
- Installation of equipment
- Evaluate and resolve network problems
- Install network application software
- Install network upgrades
- Create software images for workstations
- 
- Assist staff with software problems
- Conduct staff training
- Organize staff training
- Organize, maintain, and help author the district technology plan
- Oversee the implementation of the district technology plan
- Organize, maintain, and help author the district technology curriculum
- Oversee the implementation of the district technology curriculum
- Communicate with staff and administration regarding technology issues

## Technology Aide responsibilities

- Assist students with software procedures and tasks
- Demonstrate software use for students and staff
- Assist staff with software procedures and tasks
- Monitor student use of computers
- Clean printers and replace cartridges
- Install stand-alone software
- Troubleshoot and repair hardware problems
- Troubleshoot and repair software problems
- Provide assistance in troubleshooting network problems
- Set up new computer systems
- Maintain district website
- Help organize supplies and references
- Work with and assign tasks to student technology aides
- Conduct staff training
- Communicate with staff regarding technology issues
- Set up and maintain user accounts
- Maintain, enroll, and report progress of students in keyboarding and Compass programs.

## Contracted Support

### **MAISD scope of support**

- Advise regarding method and speed of Internet access
- Support Internet access equipment
- Troubleshoot Internet access problems
- Maintain and provide support for the off-site accounting and student record system
- Provide training for the accounting/student record system
- Payroll support and training
- Coordinate activities and information exchange with other area school districts
- Provide application software training
- Provide technology curriculum-integration training
- County wide Fiber updating and design services
- REMC statewide technology purchasing contract
- Discovery Streaming and Merit accessibility
- Technology Committee professional development

### **Ottawa Area/Virtual University**

- County wide co-op services for Virtual University - on-line learning opportunities.

### **Muskegon Community College/White Lake Area Community Education Consortium**

- County wide cooperative services for on-line learning opportunities, credit recovery, and community classes.
- Adult high school completion services.
- Adult Basic Education.
- G.E.D preparation.
- English as a Second Language (ESL).

### **Commercial Equipment Company**

- Copy Machine service and maintenance

# Appendix C

## Educational Technology Standard & Expectations

### Grade 2 Exit Outcomes

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Basic Operations and Concepts</b>			
Expectations	Not Yet	Met	Exceeded
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			
<b>Social, Ethical, and Human Issues</b>			
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			

<b>Technology Productivity Tools</b>	<b>Not Yet</b>	<b>Met</b>	<b>Exceeded</b>
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			
<b>Technology Communication Tools</b>			
1. identify procedures for safely using basic telecommunication tools (e.g., email, phones) with assistance from teachers.			
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.			
<b>Technology Research Tools</b>			
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			
<b>Technology Problem-Solving and Decision-Making Tools</b>			
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)			

# Educational Technology Standard & Expectations

## Grade 5 Exit Outcomes

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Basic Operations and Concepts</b>			
Expectations	Not Yet	Met	Exceeded
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., email 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			
<b>Social, Ethical, and Human Issues</b>			
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 online			
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			

Grade 5 Exit Outcomes Continued

<b>Technology Productivity Tools</b>			
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 of project			
<b>Technology Communication Tools</b>	Not Yet	Met	Exceeded
1. use basic telecommunication tools (e.g., email, 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)			
<b>Technology Research Tools</b>			
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, online newspapers, 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			
<b>Technology Problem-Solving and Decision-Making Tools</b>			
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)			



# Educational Technology Standard & Expectations

## Grade 12 Exit Outcomes

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

Basic Operations and Concepts	Not Yet	Met	Exceeded
1. discuss emerging technology resources (e.g. podcasting, webcasting, compressed video delivery, online file sharing, graphic 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 on-line 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			
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 or 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 cost of unethical uses of information and computer technology			
5. identify ways that individual 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 skills requirements			
12. design and implement a personal learning plan that includes technology to support his/her lifelong learning goals			

## Grade 12 Exit Outcomes Continued

<b>Technology Productivity Tools</b>			
1. complete at least one online credit, or non-credit, course or online learning experience	Not Yet	Met	Exceeded
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 build-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			
<b>Technology Communication Tools</b>			
1. identify and describe various telecommunications or online technologies (e.g., desktop conferencing, listsevs, blogs, virtual reality)			
2. use available technologies (e.g., desktop conferencing, e-mail, groupware, IM) 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, video conferencing)			
<b>Technology Research Tools</b>			
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)			
<b>Technology Problem-Solving and Decision-Making Tools</b>			
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			

# Appendix D

## The Technology Code of Ethics

Use of technology at North Muskegon Public Schools is a privilege extended to students and staff in order to enhance learning and exchange information. Interacting with the learning tools provided by technology will furnish a graduate with many of the job readiness and learning skills required by our evolving business and educational community. But with access comes responsibility - both for the equipment and for the information accessed and created through the use of technology. Users working within the guidelines of the North Muskegon Technology Code as outlined will receive the maximum benefits of the network.

Each user of technology shall read the following Rights, Responsibilities, Printer Usage, Internet Acceptable Use and Disciplinary Action statements and sign the User's Responsibility Declaration form which follows prior to accessing or using technology.

### Conditional Rights

- Users have the conditional right to use all authorized hardware and software for which they have received training to facilitate learning and enhance educational information exchange.
- Users have the conditional right to access information from outside resources which facilitates learning and enhances educational information exchange.
- Users have the conditional right to access the Internet to retrieve information which facilitates learning and enhances educational information exchange.
- Users have the conditional right to sign up for Listserves and Newsgroups on the Internet which facilitate learning and enhance educational information exchange.

### Responsibilities (Listing does not indicate priority ranking)

Any user has the right to make use of all hardware and software on which he/she has been trained. However, all students and staff utilizing technology as an educational resource must also accept responsibility for the appropriate use and maintenance of that hardware or software. Responsible users must adhere to the following behavior guidelines:

- Users are responsible for utilizing district technology only for facilitating learning and enhancing educational information exchange consistent with the purpose of the district.
- Users are responsible for obtaining permission before using their own media on district equipment.
- Users are responsible for keeping programs of a viral nature off all school equipment. The user will be held accountable for any deliberate attempts at knowingly installing and/or running a computer virus.
- Users are responsible for properly using and caring for hardware and software. Users are to seek assistance if needed.
- Users are responsible for ensuring that no hardware or software is relocated, modified or abused in any way.
- Users are responsible for seeing that no hardware is disconnected, removed or relocated.
- Users are responsible for keeping all food and drink out of the computer labs and away from other electronic equipment.
- Users are responsible for using only the network user ID assigned to them and will be held accountable for all activity performed under that ID. The privacy of passwords is to be maintained at all times.
- Users are responsible for adhering to the rules established in various labs relating to specialized equipment which may be found there.
- Users are prohibited from using district technology for private business, for product advertisement or political lobbying, or for making any unauthorized financial commitments.
- Users are prohibited from the malicious use of technology to disrupt the use of technology by others, to harass or discriminate against others, to cyberbully, or to infiltrate unauthorized computer systems.

### Printer Usage Guidelines

Multiple printers are available to students so that they can produce quality typewritten documents. Students are also able to print articles and other documents related to assigned topics. When utilizing printing resources, students must adhere to the following guidelines.

- Users will be responsible for keeping images deemed inappropriate for school use from being printed on any printer.
- Users will be responsible for practicing printing conservation. Print only what is needed and use what is printed.
- Users will be responsible for notifying the designated person(s) if there is need for a printer set-up change.

## Internet Acceptable Use

The Internet offers vast, diverse, and unique resources to both students and teachers. Our goal in providing this service to teachers and students is to promote educational excellence in our schools by facilitating resource sharing, innovation, and communication. With access to computers and people all over the world also comes the availability of material that may not be considered to be of educational value in the school setting. However, the North Muskegon Public School District firmly believes that the valuable information and interaction available on this worldwide network far outweighs the possibility that users may procure material that is not consistent with the educational goals of the district. The following guidelines will apply to all users of the Internet.

### Rights

- Users have the right to access the Internet to facilitate diversity and personal growth in technology, information gathering skills, and communication skills.
- Student Users have a conditional right to request newsgroups from the Internet in order to facilitate real-time learning with members on the network.
- Student Users have the conditional right to sign up for Lists on the Internet.

### Responsibilities

Users are responsible for all material received via the information network under his/her user account. Users accept responsibility for preventing all sexually offensive materials, inappropriate text files, or files dangerous to the integrity of the school's network, equipment, or software from entering the school network.

Users are responsible for making appropriate use of the electronic mail system, reporting any violations of privacy, and making only those e-mail contacts which facilitate learning and enhance educational information exchange.

Users are responsible for adhering to the copyright policy and procedure in the use of hardware and software and in transmitting or copying of text or files on the Internet or from other sources.

- Users are responsible for making all subscriptions to Listserves or Newsgroups known to the technology designee and for seeking prior approval before requesting such subscriptions on the Internet.
- Users will be responsible for abiding by the generally accepted rules of network etiquette. These include (but are not limited to) the following:
- Use appropriate language. Do not become abusive in the message, swear, or use vulgarities.
- Do not reveal your personal address or phone number.

### Disciplinary Action

Users violating any of these Rights and Responsibilities will face disciplinary action deemed appropriate in keeping with the disciplinary policies and guidelines of the school. Users will be required to make full financial restitution for any unauthorized expenses incurred or any damages caused.

Middle and High school students will be disciplined for violating the privileges outlined in the above document. If the student should be found in violation of the Technology Code of Ethics, he/she can expect the following action to be taken.

- First Offense - The student will lose all computer privileges for two weeks. The offense will be recorded in the student's file. The student will review the Technology Code of Ethics with the appropriate staff member before computer privileges will be reinstated.

- Second Offense - The student will lose all computer privileges for six weeks. The offense will be recorded in the student's file. The student will be expected to write a technology behavior plan for him/herself before computer privileges are restored. This plan will be signed by the student, his/her parents, the building technology person, and an administrator.
- Third Offense - The student will lose computer privileges for the school year. When privileges are reinstated, they will be on a limited basis.
- Fourth Offense - The student will lose computer privileges for his/her remaining time at North Muskegon Schools.

Any violation which affects the integrity of the network will result in permanent removal from the network for the remainder of the year.

The high school administration reserves the right to administer disciplinary action in a discretionary manner. Disciplinary action for computer offenses may vary from those outlined above.

#### User's Responsibility Declaration

#### Student

I have read, understand and will abide by the North Muskegon Public School's Technology Code of Ethics. I further understand that any violation of the regulations above is unethical. Should I commit any violation, my access privileges may be revoked, and school disciplinary action may be taken.

User Signature: \_\_\_\_\_

Print User Name: \_\_\_\_\_ Date : \_\_\_\_\_

#### Parent

As the parent or guardian of this student, I have read the North Muskegon Public School's Technology Code of Ethics. I understand that while this access is designed for educational purposes, it is impossible for North Muskegon Public Schools to restrict access to all controversial materials, and I will not hold the District responsible for materials acquired on the network. I hereby give permission to issue an account for my child and certify that the information contained on this form is correct.

Parent or Guardian's Signature: \_\_\_\_\_

Print User Name: \_\_\_\_\_ Date: \_\_\_\_\_

Daytime Phone Number: \_\_\_\_\_

#### Sponsoring Teacher

The North Muskegon School District code of ethics has been presented to all staff and it has been agreed that it will be promoted with all students. Students will be informed of the acceptable use of the network and proper network etiquette at the class rule meetings. New students will be informed by the computer facilitator and/or counselor.

Teacher's Signature: \_\_\_\_\_

Print User Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Internet Safety Policy - Appendix E

## North Muskegon Public Schools

### INTERNET SAFETY POLICY

It is the policy of North Muskegon Public Schools that access to the Internet provided by North Muskegon Public Schools is expected to be used as an educational and/or work-related resource and that such access shall be made available subject to such rules and regulations as may be established, provided that no use shall be permitted which, in the judgment of North Muskegon Public Schools, is in any way prejudicial to the best interest of or in conflict with North Muskegon Public Schools.

North Muskegon Public Schools reserves the right to refuse access to the Internet by the school district to anyone when it deems it necessary in the public interest.

#### **Definitions**

1. Access to the Internet—A computer shall be considered to have access to the Internet if such computer is equipped with a modem or is connected to a computer network which has access to the Internet.
2. Minor shall mean an individual who has not attained the age of 19.
3. Obscene shall have the meaning given such term in section 1460 of title 18, United States Code.
4. Child pornography shall have the meaning given such term in section 2256 of title 18, United States Code.
5. Harmful to minors shall mean any picture, image, graphic image file, or other visual depiction that:
  - a. taken as a whole and with respect to minors, appeals to a prurient interest in nudity, sex, or excretion;
  - b. depicts, describes, or represents, in a patently offensive way with respect to what is suitable for minors, an actual or simulated sexual act or sexual contact, actual or simulated normal or perverted sexual acts, or a lewd exhibition of the genitals; and
  - c. taken as a whole, lacks serious literary, artistic, political, or scientific value as to minors.
6. Hacking shall mean attempting to gain unauthorized access to computer and network systems connected to the Internet.
7. Technology protection measure shall refer to a proxy server managed by North Muskegon Public Schools that blocks and/or filters Internet access or other means by which access may be blocked and/or filtered.
8. Authorized staff member as used herein shall refer to an adult staff member appointed by North Muskegon Public Schools.
9. Cyber Bullying shall refer to the already prohibited actions as defined by the North Muskegon Code of Conduct such as bullying, discrimination, harassment, intimidation, or other forms of social cruelty through electronic means. This includes any act that takes place on or immediately adjacent to school ground, at any school-sponsored activity, on school-provided transportation or at any official school bus stop, use of the district internet system, use of a personal digital device on campus, or off-campus activities that cause or threaten to cause a substantial and /or material disruption at school or interference with the rights of students to be secure.

# Current Software - Appendix F

Windows XP on all computers except Dell GX110 (Windows 98)

## Network Applications

Adobe Reader

PowerSchool Gradebook and SIS

Windows Movie Maker

Microsoft Office 2010

Access

Excel

Outlook

PowerPoint

Publisher

Word

Web-browsers

Microsoft Internet Explorer

Mozilla Firefox

Google Chrome

Premiere AT--Universal Reader

Windows Media Player

## Elementary

Bernie's Typing Travels

Micro Type 3

Accelerated Reader

Kid Pix 4

Compass Learning

## Elementary Stand-alone programs

Earobics, Spell 1 & 2

Edmark Reading Program – Lvl 1 & 2

Fact Master, Working Phonics

Greatest Children's Stories Ever Told

Math Blaster, Performance Math

## Middle/High School

Micro Type 3 (MS)

Tinker Plots (MS)

Adobe CS-5

Adobe Professional

Dreamweaver

Fireworks

Flash

Illustrator

In-Design

Photoshop

PTC ProDeskTop 8.9--CAD Program (HS)

Go Venture (HS)

Compass Learning (MS/HS resource rooms)

# Sample Technology Survey - Appendix G

## North Muskegon Public Schools

### Staff Technology Survey

#### Skills and Instructional Expectations

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Check the appropriate box:**

**Y - I know how to do this and could teach a student how to do this.**

**N - I'm not sure of this myself and would not be comfortable teaching a student to do this.**

<b>Y</b>	<b>N</b>	<b>Basic Computer Operations and Concepts</b>
		Copy document from hard disk to flash drive and vice versa
		Create and name/rename subdirectories/folders
		Create a shortcut to a file or program
		Open and work with more than one application at a time
		Scanner uses
<b>Y</b>	<b>N</b>	<b>Set up and Maintenance</b>
		Organize files and folders in your Home Directory
		Utilize a virus protection program to check a disk
		Make backup copies of key documents
		Ensure appropriate licensing and documentation for software is available
		Ability to troubleshoot common technical problems (login, printer issues, etc.)
		Report technology problems using one of the proper methods
<b>Y</b>	<b>N</b>	<b>Word Processing</b>
		Name, save, retrieve, revise, and rename a document
		Insert Clip art into a document
		Change text alignment, margins, and line spacing
		Set and use tab stops
		Review or change text and special characters using find and/or replace commands
		Create a header or footer in a document
		Create and use a table within a word processing document
		Insert date, time, page number in a document
		Create and use a mail merge database
		Add columns to a document
		Design lessons that utilize word processing as part of the activity
<b>Y</b>	<b>N</b>	<b>Spreadsheet/Graphing</b>
		Interpret and communicate information in an existing spreadsheet
		Enter/edit data in existing spreadsheet to solve a problem
		Create a spreadsheet with rows, columns, labels and values
		Add/delete rows and columns in a spreadsheet
		Change column width and row height
		Create a formula using functions (SUM and Average) and a range of cells
		Copy values using fill down and fill across



		Create and print a graph from spreadsheet data
		Format a cell or range of cells for the following: currency, date, time, percentage, and fixed decimal
		Design lessons that utilize spreadsheets or graphing as part of the activity
<b>Y</b>	<b>N</b>	<b>Database</b>
		Browse through an existing database to find information
		Edit data in an existing database
		Add/delete records in an existing database
		Design and create a database with multiple fields and records
		Sort a database by specific fields to solve a problem
		Copy text or graphics on a web page and paste into a word processing document
		Create Bookmarks/Favorites and use hotlists to get to useful Web sites
		Add, delete and organize Bookmarks/Favorites
		Attach a file to an email message
		Design lessons that utilize web searches as part of the activity
		Integration Skills
		Evaluate, select, and integrate the use of technology into the curriculum of one's
		Evaluate responsible uses of technology by students including intellectual property, copyright
		Selection, evaluation, and use of appropriate computer/technology based materials to support
		Integrates effective use of technology to meet a variety of learning styles
		Produce an electronic slide show (PowerPoint, KidPix, etc.)
		Use an electronic slide show as part of presenting a regular lesson
		Use a computer projector to display computer output on a large screen
<b>Y</b>	<b>N</b>	<b>Data Retrieval</b>
		Use IGOR to retrieve MEAP data and/or SAT data
		Print reports from compass learning

