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Madison School District

School District #46090

Lenawee Intermediate School District #46000

Technology Plan

July 1, 2014 – June 30, 2017

*Developing Individual Excellence Through Rigorous Academics,
Innovative Technology and Personal Attention.*

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Madison Schools Technology Plan 2014-2017

Section 2: Introductory Material

School District Vision

Developing individual excellence through rigorous academics, innovative technology and personal attention.

Introduction

- *Madison School District is located in Lenawee County, Michigan. It encompasses portions of the city of Adrian and the townships of Adrian, Madison and Palmyra. Student enrollment for the 2013-2014 school year was 1566 students. It is made up of a diverse population of approximately 62% white, 31% Hispanic, 4% African American, and 3% other ethnicity. 48% of our students qualify for free lunch, and 4% of students qualify for reduced lunch. The District enrollment continues to increase due to Michigan schools of choice legislation. There are 93 teachers employed by the District. The school District is made up of three connected buildings as follows:*
 - The Elementary building consisting of the four-year-old program (Michigan School Readiness) through the fifth grade.
 - The Middle School consisting of the sixth grade through the eighth grade.
 - The High School consisting of the ninth grade through the twelfth grade.

All three of our school buildings have met the standards set by the North Central Association to achieve accreditation.

Section 3: Vision and Goals

Our vision is to develop students who are able to effectively utilize technology to live, learn, and work successfully in an information-rich society. Specifically, technology will enable learners to become:

- Communicators, collaborators, publishers, and producers
- Problem solvers and decision makers
- Information seekers, analyzers, and evaluators
- Creative and effective users of productivity tools
- Informed, responsible, and contributing citizens
- Successful in an ever-changing world

Goals and Objectives

To support our mission and vision for technology within our District, we have established the following goals and objectives:

- I. Curriculum:**
Goal: To integrate the Michigan Education Technology Standards into the K-12 core curriculum for each grade level.

- II. Professional Development:**
Goal: To provide needs-based professional development that supports effective integration of technology into the classroom and on-going support.

- III. Infrastructure, Hardware, Technical Support, Software**
Goal: To provide greater access to technology as possible and achieve 97% uptime.

- IV. Funding and Budget:**
Goal: Effectively utilize budgeted dollars for technology hardware and software acquisitions while seeking additional grant opportunities.

- V. Monitoring and Evaluation:**
Goal: To develop and utilize evaluation tools to identify instructional needs and monitor progress in order to improve student achievement.

District Improvement Goals

Goal 1: All students at Madison School District will become proficient readers.

Measurable Objective 1: 73% of All Students will demonstrate proficiency towards reading in English Language Arts by 06/17/2015 as measured by State Assessments.

Goal 2: All students at Madison School District will become proficient in Science.

Measurable Objective 1: 41% of All Students will demonstrate proficiency toward the core academic area in Science by 06/17/2015 as measured by State Assessments.

Goal 3: All students at Madison School District will become proficient in mathematics.

Measurable Objective 1: 57% of All Students will demonstrate proficiency toward in Mathematics by 06/17/2015 as measured by State Assessments.

Goal 4: All students at Madison School District will become proficient writers.

Measurable Objective 1: 64% of All Students will demonstrate proficiency towards writing in English Language Arts by 06/17/2015 as measured by State Assessments.

Goal 5: All students at Madison School District will become proficient in Social Studies.

Measurable Objective 1: 53% of All Students will demonstrate proficiency of concepts in Social Studies by 06/17/2015 as measured by State Assessments.

Strategy 1 (Planning and Preparation): Staff will participate with professional development related to Understanding by Design (UbD) and utilize UbD to guide their planning and preparation to improve student proficiency towards reading.

Understanding by Design, or UbD, is a tool utilized for educational planning focused on "teaching for understanding" advocated by Jay McTighe and Grant Wiggins in their Understanding by Design (1998), published by the Association for Supervision and Curriculum Development. The emphasis of UbD is on "backward design", the practice of looking at the outcomes in order to design curriculum units, performance assessments, and classroom instruction.

Strategy 2 (Instruction and Learning): All content area staff will utilize the Gradual Release of Responsibility model to ensure students learning.

The Gradual Release of Responsibility Model or GRR Model is a particular style of teaching which is a structured method of pedagogy framed around a process devolving responsibility within the learning process from the teacher to the eventual independence of the learner. This instructional model requires that the teacher, by design, transitions from assuming "all the responsibility for performing a task...to a situation in which the students assume all of the responsibility." The ideal result is a confident learner who accepts responsibility for their own learning and directs this learning through the cognitive processes involved, moving through the academic spectrum, to independent choice (personalized learning). As Buehl (2005) stated, the GRR model "emphasizes instruction that mentors students into becoming capable thinkers and learners when handling the tasks with which they have not yet developed expertise".

Strategy 3 (Instruction and Learning): Staff will facilitate academic literacy strategies (response to text) in all content areas.

Through "Response to Text" students develop a variety of strategies in response to literature through written and oral forms demonstrating comprehension through interpretation, evaluation, and analysis. Students respond to literature often times by making comparisons of texts through text to self, text to text, and text to world and often respond to literature by justifying claims using evidence found in text. The objective is to have students connect ideas and information found in what they read to events and ideas from their own knowledge and experiences and from other texts to empower their understanding and interpretation. Ultimately "Response to Text" supports the process to interpret, summarize, and/or draw conclusions with examples from text and/or from their own experiences.

Strategy 4 (Monitoring, Assessment, and Follow-Up): Teachers will model depth of knowledge levels 2 and 3 (Skills and Concepts & Strategic Thinking and Reasoning) on a daily basis.

Students who master Level 2 use information or conceptual knowledge to carry out a procedure. Students who master Level 3 break information into parts to explore understanding and relationships to make judgments.

Section 4: Curriculum Integration

Curriculum Goal: To integrate the Michigan Education Technology Standards into the K-12 core curriculum for each grade level.

Objective A: Work collaboratively with school representatives to begin alignment and development.

Strategies	Outcome	Timeline
Form a new Technology Integration Committee (TIC) with representation of each building level, technology Coordinator, administration.	Meet monthly to oversee implementation of technology integration goals and strategies	Reviewed annually
The TIC will coordinate the alignment of the District's curriculum with state and national standards.	K-12 curriculum aligned with state and national standards	Reviewed annually
Identify and promote curricula and teaching strategies that integrate technology effectively into the classroom to achieve our educational goals.	Use a defined curriculum process to regularly review and update curriculum, instructional strategies and instructional resources in all content areas.	Review Ongoing

Section 5: Student Achievement

Curriculum Objective B: Analyze student achievement data using various software applications annually and disseminate data to all stakeholders.

Strategies	Outcome	Timeline
<p>Madison Schools currently uses NWEA and their web based system to assess students in grades K-10.</p> <p>Aimsweb is also used to assess student literacy skills in grades K-8.</p> <p>State level assessments are also administered to our students in grades 3-11.</p>	<p>The District will annually review the student assessment data for the purpose of continually improving student learning. Assessment data will be used to determine our gap causes and will assist in driving our instruction.</p>	<p>Data will be reviewed after each benchmark has been administered (2 to 3 times per school year)</p>

Section 6: Technology Delivery

Curriculum Objective C: Expand class/course opportunities using online/distance learning opportunities insuring that each student will receive at least one online/distance learning class/course before they graduate.

Strategies	Outcome	Timeline
Madison Schools will provide each student with an online learning opportunity to fulfill the requirements of the Michigan Merit Curriculum.	Fulfillment of Michigan Merit Curriculum	Ongoing review
Required technology courses/classes to expand student knowledge.	Completion of requirements based on METS.	Annual Review
Expand the use of software as an intervention strategy for students needing additional assistance in completing a class/course work and for credit recovery in 9th - 12th grade	Student educational needs are reviewed and additional assistance is provided.	Ongoing review

Section 7: Parental Communication and Community Relations
Curriculum Objective D: Madison Schools understands the importance of communication with parents and the community. A goal in the District Improvement Plan is to improve communication between all stakeholders.

Strategies	Outcome	Timeline
Communicate with community and parents via the web site, monthly published newsletter available on line as well as hard copy.	All teachers will use Home Access Center and web pages for communication with students and parents.	Ongoing review
Technology Plan, District Plan, School Improvement Plans and the Annual Education Report will be available on the District website	Transparency Reporting	Ongoing review
Annual District Strategic Planning day with parent focus group and community focus group.	Review and development of technology plan as well as input to changes that need to be made.	Annually
Provide real time notifications to parents regarding information about their students, event reminders and school closings/delays.	Utilize Blackboard connect to provide communications via, email, text, and voice calls to parents.	Ongoing review

Section 8: Collaboration

Curriculum Goal E: Madison schools does not provide adult literacy training. N/A

Section 9: Professional Development

Professional Development Goal: To provide needs-based professional development that supports effective integration of technology into the classroom and on-going support.

Objective G: Provide training for all staff in technology integration.

Strategies	Outcome	Timeline
Survey staff annually to determine needs of staff for professional development related to technology.	Staff survey completed annually to plan for early release professional development	Survey conducted annually
Use available assessment data to evaluate training and integration needs	Data will determine needs to improve instruction.	2-3 times yearly after benchmark.
TIC members will work with the District Technology Coordinator to provide training for staff members.	Special emphasis on customized professional development aligned with state grade level/curricular responsibilities and level of user expertise.	Annual review
District Technology Coordinator, TIC members, and other staff members will attend technology training opportunities where emerging technology is showcased.	Participation in county Tech Coordinator meetings Participation in state video conferences Spring MACUL conference Attend relevant workshops Fall MAEDS conference	Annual Review

<p>The TIC and the Technology Coordinator will work together to research software and electronic learning opportunities for potential incorporation into the curriculum</p>	<p>Improved student learning and teacher effectiveness as well as continuous staff learning.</p>	<p>Ongoing review</p>
<p>TIC members will present information regarding technology-based curriculum materials including research studies and documentation at TIC meetings</p>	<p>Expand the use of software as an intervention strategy for students needing additional assistance</p>	<p>Ongoing review</p>
<p>Hold a district wide meeting of stake holders to review the current state of technology.</p>	<p>A yearly district wide meeting is held every fall. Attendees include staff, parents, and student.</p>	<p>Ongoing review</p>

Section 10: Professional Development Supporting Resources
Professional Development Objective G: Integrate computer software applications and electronically delivered learning materials into the curriculum.

Strategy	Outcome	Timeline
Technical ongoing and as needed training provided to staff by technology coordinator and other staff.	Support and improve the use of technology equipment.	Ongoing review
Hardware and software training tutorials (available in print, video and online)	High available of learning material and self paced training.	Ongoing review
During the conversion from Windows XP to Windows 7, Personal training for each staff member will be provided as follow up to the conversion.	A custom workspace will be created for user on Windows 7.	Summer/Fall 2014

Section 11: Infrastructure, hardware, technical support, and software

Goal: To provide greater access to technology as possible and achieve a 97% uptime.

Systems Configuration

Madison Schools, K-12 resides under one roof. The network is currently configured with cat5 wiring to most classrooms for networking and 1 cat3 drop for phone. The majority of our rooms are wired as following:

- 1 cat3 and 1 cat5 for teacher station
- 4 cat5 for student stations

The network also currently contains 11 network-wiring closets/locations:

- Server Room
- Science and English Wing
- High School Library
- Athletic Department
- Middle School Wing
- Upper Elementary Wing
- Lower Elementary Wing
- Elementary Commons
- Middle School Room 15
- Middle School Room 10
- High School Room 114
- Elementary School Room 11

The network-wiring closets currently contain 100 Mbit switches with Gigabit uplinks. All ports are active on the switches but not all are physically connected to the Patch panel.

- All stations on the network are Windows XP or greater.
- In the summer 2014 all workstation will be upgraded to Windows 7.
- There are 511 desktop/laptops and 83 Wyse thin clients on the network. 83 (16%) of the systems are 6 years old or older.
- There are 126 iPads.
- Our network currently contains 8 Computer Labs.
- High School Computer Lab with 27 student stations, 1 teacher station, 1 laser printer, and 1 video projector each.

- Tech Prep Lab with 26 student stations, 1 teacher station, 1 black laser, and video projector.
- High School Library Teacher Resource Lab with 24 student stations, 1 teacher station, and 1 copier-printer and an additional bank of 9 stations for student use.
- High School Room 114 On-Line learning Lab with 14 student stations, 1 teacher station, and video projector.
- Middle School tech Prep Lab with 26 student stations, 1 teacher stations, 1 black laser, and video projector
- Middle School Room 15 Lab with 26 student stations, 1 teacher stations, 1 black laser, and video projector
- Elementary Room 511 Lab with 24 student stations, 1 teacher stations, 1 black laser, and video projector.
- Elementary Room 11 Lab with 24 student stations and 1 black laser.
- The voice network provides a phone in every classroom within the District.
- Every staff member has voicemail allowing easier communication between staff and parents.
- Internet access for the District is provided by the Lenawee Intermediate School District.
- The High School has 29 laptops on a cart.
- High school room 118 has 24 laptops
- The Middle School has 29 laptops on a cart.
- The Elementary has 30 laptops on a cart.

The network also consists of a campus wide wireless system that covers 100% of instructional areas. The wireless is designed to allow for a 1 to 1 deployment of devices. Total capacity is calculated to provide wireless connectivity to 5700 devices.

Tech support is available to students and staff via a ticketing email system.

Tech support outside the District is available from the Lenawee County Intermediate School District if we are unable to handle request at the District level.

The technology staff consists of a full time technology director and a part time student helper.

Technology Access and Maintenance: Increase student and staff accessibility of technology by continuing to update and rotate hardware inventory District-wide and evaluating technology usage. Staff and student

workstations should not be more than 6 years old. Backend equipment rotation is evaluated on a system by system basis.

Standardize on a single vendor solution that will provide the best interoperability between systems.

Funding for the year 2014-2015 goals have been approved and is in place. Year 2015-2016 and 2016-2017 goals are dependent on funding.

Strategies	Timeline
1. Install 2 SmartBoards	○ 2 in 2014-2015
2. Install 2 projectors in classrooms	○ 2014-2015
3. Install additional switches to accommodate increased clients.	○ 2014-2017
4. Migrate workstations to windows 7 if minimum system requirements are met.	○ 2014-2015
5. Replace 136 ageing workstations.	○ 107 in 2014-2015, 57 in 2015-2016, 50 in 2016-2017
6. Install 2 document cameras	○ 2 in 2014-2015
7. Install 2 Front Row Sound systems in the Elementary.	○ 2 in 2014-2015

Strategies	Timeline
8. Install 6 multi-media sound systems.	2 in 2014-2015, 2 in 2015-2016, 2 in 2016-2017
9. Upgrade network switches to reduce traffic bottlenecks between wiring closets.	As needed based on traffic reports.
10. Look at offsite storage for disaster recovery of key data.	2014-2016

Section 12: Infrastructure, hardware, technical support, and software

Objective I: *Support 'always-on' learning using voice, video and data. We are expanding a variety of IP based technologies across the District to provide an anytime/anywhere learning experience.*

Strategies	Outcome	Timeline
1. Extend computer lab hours before and after the school day.	<ul style="list-style-type: none"> ○ Students are able to receive more computing time. 	<ul style="list-style-type: none"> ○ Continue 2014-2017
2. Continue to borrow special needs technology from the ISD.	<ul style="list-style-type: none"> ○ Provides special need students with access to the technology they can use. 	<ul style="list-style-type: none"> ○ Continue 2014-2017
3. Create a Personal Learning Device (PLD) initiative to investigate the use of portable devices in and out of the classroom.	<ul style="list-style-type: none"> ○ Technology follows the student to provide continues access to learning resources. aka 1-1. 	<ul style="list-style-type: none"> ○ 2015-2017

<p>4. Install a system to allow for creation of shared resources. (SharePoint)</p>	<ul style="list-style-type: none"> ○ Allow staff and students to access school technology resources from outside the building 24x7. 	<ul style="list-style-type: none"> ○ 2015-2017
<p>5. Provide public wireless Internet access</p>	<ul style="list-style-type: none"> ○ Allow the public access to district Internet resources after school hours. The CIPA filter is applied to all traffic. 	<ul style="list-style-type: none"> ○ 2015-2017

Section 13 Budget and Timetable

Goal : *To effectively utilize budgeted dollars for technology hardware and software acquisitions.*

Hardware Purchase Plan 2014-2017

Purchase	Approximate Cost 2014- 2015	Approximate Cost 2015- 2016	Approximate Cost 2016- 2017
• Add “Smart board Technology” to Classrooms	\$3,200	0	0
♦ Add/Upgrade network switches	\$7,000	\$7,000	\$7,000
♦ Server maintenance	\$2000	\$2000	\$2000
• Replace 136 ageing workstations	\$26,720	\$38,460	\$48,430
• Install Front Row Sound systems in Elementary classrooms	\$2,000	0	0
• Purchase 6 carts of mobile computing devices (iPads or laptops, 2 carts per year)	\$40,000	\$40,000	\$40,000
• Install 6 multi-media sound systems	\$1,000	\$1,000	\$1,000
• HP Server/SAN/Backup Maintenance	\$2,390	\$2,390	\$2,390
• Offsite backup storage	\$2,500	\$2,500	\$2,500
• XMT 850 WatchGuard Maintenance	\$0	\$5,100	\$5,100
• Redistribute above computers to maintain Inventory upgrades	0	0	0
• Hardware Total	\$86,810	\$98,450	\$108,420

**Software Purchase Plan
2014-2017**

Purchase	Approximate Cost 2014-2015	Approximate Cost 2015-2016	Approximate Cost 2016-2017
• Microsoft Enrollment for Education Solutions (EES Agreement)	\$12,034	\$12,034	\$12,034
• Yearly Maintenance fee for Barracuda SPAM	\$1,148	\$0	\$0
• ADToolkit	\$291	\$291	\$291
• Mobile Device Manager system (MDM)	\$1,215	\$1821	\$2427
• Add new software as curriculum changes and staff additions are needed	\$3000	\$3000	\$3000
• HP PCM+ Maintenance fee	\$1,210	\$1,210	\$1,210
• Software Total	\$18,898	\$18,356	\$18,962

**Other Technology Costs
2014-2017**

Service	Approximate Cost 2014- 2015	Approximate Cost 2015- 2016	Approximate Cost 2016- 2017
• Student Tech	\$4,000	\$4,000	\$4,000
• Technology Director	\$59,000	\$60,000	\$61,000
• Computer/Network Tech	\$25,000	\$25,000	\$25,000
• Telecommunication Fees	\$ 13,442	\$13,442	\$13,442
• Tech Capital Fee paid to LISD 1457 (2013-14) students @\$2.00	\$3,126	\$3,126	\$3,126
• Internet Connection/Tech Services paid to LISD 1457 (2013-2014) students @\$10.00	\$15,631	\$15,631	\$15,631
• Technology Repairs	\$9,000	\$9,000	\$9,000
• Professional Development	\$5,000	\$5,000	\$5,000
• School Fusion	\$946	\$946	\$946
• Other Total	\$134,145	\$135,145	\$136,145
• Budget Total	\$229,853	\$251,951	\$263,527

Section 14 Funding and Budget

Objective K: Coordination of Resources

Strategies	Outcome	Timeline
1. Apply for Universal Service Funds with LISD annually.	<ul style="list-style-type: none"> ○ Universal Service Funds grant applications completed by established deadlines. 	<ul style="list-style-type: none"> ○ Annually
2. In addition to Universal Service Funds Grant, apply for other alternative funding sources per school year as available, such as MACUL, etc.	<ul style="list-style-type: none"> ○ Completed grant applications. 	<ul style="list-style-type: none"> ○ As grants become available
3. Utilize School District operational funds	<ul style="list-style-type: none"> ○ Allocation of technology funds to accommodate growth and expansion 	<ul style="list-style-type: none"> ○ Annually
4. Apply for e-rate funding for local and long distance phone servers and Internet access.	<ul style="list-style-type: none"> ○ N/A 	<ul style="list-style-type: none"> ○ Annually
4. Participate in the state wide 22i grant and state wide purchasing program.	<ul style="list-style-type: none"> ○ Big savings in technology purchases and services 	<ul style="list-style-type: none"> ○ Ongoing

Section 15: Monitoring and Evaluation

Goal: To develop and utilize evaluation tools to identify instructional needs and monitor progress in order to improve student achievement.

Madison Schools currently uses NWEA and their web based system to review and monitor student testing scores in the fall and spring. Currently the District has started to use Data Director (web based) to analyze data (both at the teacher and administrative level) as related to our curriculum. We also use the D4SS (Data 4 Student Success) and MISchoolData systems. These evaluation tools identify how well the students are learning in the different curriculum areas. The technology that is being used is just one of the many resources teachers have to deliver instruction. Teachers will evaluate all of their teaching methods and models to improve classroom instruction for all their students.

- Evaluation must be conducted at every level of staff development
- Student achievement will be evaluated in the Fall and Spring on NWEA, MEAP in October, ACT/MME in early Spring, the Explore and Plan in late fall.
- Gather and publicize information about technology and its impact on student achievement and attitudes, teacher performance, and parents
- Encourage staff to conduct and share informal research on the use of technology
- Revise training as technologies and teaching strategies change
- The goal is to become more focused on curriculum integration and to utilize data to drive instruction.
- Training is afforded before (after and during) school hours. Partnerships with businesses and colleges are encouraged.

Technology Plan Assessment

It is expected that a minimum of 70% of all project components will be completed prior to the end of each school year from 2014 through 2017 as monitored by the technology coordinator.

District Assessment System

Each building Principal is responsible for all student evaluations. The process for developing student academic goals and evaluating progress toward these goals is data driven. Each building level has a school improvement plan that prescribes benchmark measures of student academic achievement to be administered by grade level and content area. Benchmark

Assessments – for example, Michigan Educational Assessment Program (MEAP) test scores – are a key element of a broader system of assessment used to inform the processes of curriculum planning and review, school improvement planning, budgeting, student placement, building organization and professional development in Madison Schools. The purpose of the overall assessment system is to collect information for the purpose of continually improving student learning.

The seven assessment standards of the Michigan Curriculum Framework are used to guide the development of authentic assessment practices at all levels of instruction. These standards describe the tasks' authentic assessments that require students to perform and include the following: 1) organize information, 2) consider alternatives, 3) show understanding of disciplinary content, 4) show understanding of disciplinary process, 5) elaborate on their understanding through written communication, 6) connect problems to the world beyond the classroom, and 7) communicate their knowledge to an audience beyond the classroom. Assessments are based on each student learning objective contained in the District curriculum that is aligned with the state and national curriculum standards. Assessment informs instruction so that instruction can be differentiated to meet student needs.

Section 16: Monitoring and Evaluation M: *Acceptable Use Policy*

See appendix B for Board Policy

We continue to comply with the requirements of the Children's Internet Protection Act. (CIPA) We are committed to providing a safe computing experience for our students. Staff will continue to educate students on Internet safety including appropriate on-line behavior.

Internet access for the District is provided by the Lenawee Intermediate School District. Madison School District uses a Watchguard firewall device that provides a CIPA compliant filter for internal Internet access. The filter site blocking information is provided by a Websense subscription included in the Watchguard maintenance agreement.

Email filtering is provided by a Barracuda server at the District level or by Microsoft Online Protection for Exchange.

We also require that staff supervise students accessing the Internet.

Appendix A

Madison Public Schools Technology Curriculum 2014 Grades PK-2

PK_2.CI. Creativity and Innovation By the end of 2 nd grade each student will...
1. use a variety of digital tools (e.g., word processors, drawing tools, simulations, presentation software, graphical organizers) to learn, create, and convey original ideas or illustrate concepts
PK_2.CC. Communication and Collaboration By the end of 2 nd grade each student will...
1. work together when using digital tools (e.g., word processor, drawing, presentation software) to convey ideas or illustrate simple concepts relating to a specified project
2. use a variety of developmentally appropriate digital tools (e.g., word processors, paint programs) to communicate ideas to classmates, families, and others
3. use a variety of developmentally appropriate technologies for sharing information (e.g., drawing a picture, writing a story, creating a simple slide show)
PK_2.RI. Research and Information Fluency By the end of 2 nd grade each student will...
1. interact with internet based resources
2. use digital resources (e.g., dictionaries, encyclopedias, graphs, graphical organizers) to locate and interpret information relating to a specific curricular topic, with assistance from teachers, school library media specialists, parents, or student partners
PK_2.CT. Critical Thinking, Problem Solving, and Decision Making By the end of 2 nd grade each student will...
1. explain ways that technology can be used to make decisions and solve problems (e.g., cell phones, traffic lights, GPS units)
2. use digital resources (e.g., dictionaries, encyclopedias, search engines, web sites) to solve developmentally appropriate problems, with assistance from teachers, parents, school library media specialists, or student partners
PK_2.DC. Digital Citizenship By the end of 2 nd grade each student will...
1. describe appropriate and inappropriate uses of technology (e.g., computers, internet, e-mail, cell phones) and describe consequences of inappropriate use
2. identify personal information that should not be shared on the internet
3. know to inform a trusted adult if they receive or view an online communication which makes them feel uncomfortable, or if someone whom they don't know is trying to communicate with them or asking for personal information
PK_2.TC. Technology Operations and Concepts By the end of 2 nd grade each student will...
1. identify common uses of technology found in daily life
2. discuss advantages and disadvantages of using technology
3. be able to use basic menu commands to perform common operations (e.g., open, close, save, print)

4. recognize, name, and label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, printer)

5. discuss the basic care for computer hardware and various media types (e.g., CDs, DVDs, videotapes)

6. communicate about technology using developmentally appropriate and accurate terminology

7. understand that technology is a tool to help them complete a task, and is a source of information, learning, and Entertainment

8. demonstrate the ability to navigate in virtual environments (e.g., electronic books, games, simulation software, websites)

**Madison Public Schools
Technology Curriculum 2014
Grades 3-5**

3_5.CI. Creativity and Innovation
By the end of 5 th grade each student will...
1. produce a media-rich digital project aligned to state curriculum standards (e.g., fable, folk tale, mystery, tall tale, historical fiction)
2. use a variety of technology tools and applications to demonstrate their creativity by creating or modifying works of art, music, movies, or presentations
3. participate in discussions about technologies (past, present, and future) to understand these developments are the result of human creativity
3_5.CC. Communication and Collaboration
By the end of 5 th grade each student will...
1. use digital communication tools (e.g., e-mail, wikis, blogs, IM, chat rooms, web conferencing, Moodle, Blackboard) and online resources for group learning projects
2. identify how different software applications may be used to share similar information, based on the intended audience (e.g., presentations for classmates, newsletters for parents)
3. 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_5.RI. Research and Information Fluency
By the end of 5 th grade each student will...
1. identify search strategies for locating information with support, from teachers and school library media specialists
2. use digital tools to find, organize, analyze, synthesize, and evaluate information
3. recognize that web sites and digital resources may contain inaccurate or biased information
3_5.CT. Critical Thinking, Problem Solving, and Decision Making
By the end of 5 th grade each student will...
1. use digital 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)
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 problems
3. use digital resources to identify and investigate a state, national, or global issue (e.g., global warming, economy environment) and generate possible solutions
3_5.DC. Digital Citizenship
By the end of 5 th grade each student will...
1. understand that web sites or other digital resources may contain information that does not present both sides of an issue
2. discuss scenarios involving acceptable and unacceptable uses of technology (e.g., file-sharing, social networking, text messaging, cyber bullying, plagiarism)
3. recognize issues involving ethical use of information (e.g., copyright adherence, source citation)

4. describe precautions surrounding personal safety that should be taken when online

3_5.TC. Technology Operations and Concepts

By the end of 5th grade each student will...

1. use basic input and output devices; access network resources (e.g., printers, servers); and use various peripherals (e.g., scanners, digital cameras, video recorders, projectors)

2. describe ways technology has changed life at school and at home

3. understand and discuss how assistive technologies can benefit all individuals

4. know proper keyboard positioning

5. demonstrate proper care in the use of the computer hardware, software, peripherals, and storage media

6. know how to exchange files with other students using technology (e.g., network file sharing, flash drives)

7. use digital tools to acquire new knowledge for personal growth and learning

**Madison Public Schools
Technology Curriculum 2014
Grades 6-8**

6_8.CI. Creativity and Innovation
By the end of 8 th grade each student will...
1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity
2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience
3. illustrate a content-related concept using a model, simulation, or concept-mapping software
6_8.CC. Communication and Collaboration
By the end of 8 th grade each student will...
1. use digital resources (e.g., discussion groups, blogs, podcasts, video conferences, web conferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences
2. use collaborative digital tools to explore common curriculum content with learners from other cultures
3. identify effective uses of technology to support communication with peers, family, or school personnel
6_8.RI. Research and Information Fluency
By the end of 8 th grade each student will...
1. use a variety of digital resources to locate information
2. evaluate information from online resources for accuracy and bias
3. identify types of web sites based on their domain names (e.g., edu, com, org, gov)
4. employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem
6_8.CT. Critical Thinking, Problem Solving, and Decision Making
By the end of 8 th grade each student will...
1. use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem
2. evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program)

3. gather data, examine patterns, and apply information for decision making using available digital resources
4. describe strategies for solving routine hardware and software problems
6_8.DC. Digital Citizenship By the end of 8 th grade each student will...
1. provide accurate citations when referencing information sources
2. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing)
3. discuss the consequences related to unethical use of information and communication technologies
4. discuss possible societal impact of technology in the future and reflect on the importance of technology in the past
5. create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources
6. discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others)
7. describe the potential risks and dangers associated with online communications
6_8.TC. Technology Operations and Concepts By the end of 8 th grade each student will...
1. use proper keyboarding posture, finger positions, and touch-typing techniques
2. identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3)
3. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials
4. perform queries on existing databases
5. know how to create and use various functions available in a database (e.g., filtering, sorting, charts)
6. identify a variety of information storage devices (e.g., CDs, DVDs, flash drives, SD cards) and provide rationales for using a certain device for a specific purpose

7. use accurate technology terminology
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8. use technology to identify and explore various occupations or careers
--

9. discuss possible uses of technology to support personal pursuits and lifelong learning

10. discuss security issues related to e-commerce

**Madison Public Schools
Technology Curriculum 2014
Grades 9-12**

9_12.CI. Creativity and Innovation
By the end of 12 th grade each student will...
1. apply advanced software features (e.g. built-in thesaurus, templates, styles) to redesign the appearance of processing documents, spreadsheets, and presentations
2. create a web page which meets accessibility requirements (e.g., Dreamweaver, iGoogle, Kompozer)
3. use a variety of media and formats to design, develop, publish, and present projects (e.g., newsletters, web sites, presentations, photo galleries)
9_12.CC. Communication and Collaboration
By the end of 12 th grade each student will...
1. identify various collaboration technologies and describe their use (e.g., desktop conferencing, listserv, blog, wiki)
2. use available technologies (e.g., desktop conferencing, e-mail, groupware, instant messaging) to communicate with others on a class assignment or project
3. collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models)
4. plan and implement a collaborative project using telecommunications tools (e.g., ePals, discussion boards, online groups, groupware, interactive web sites, videoconferencing)
5. describe the potential risks and dangers associated with online communications
6. use technology tools for managing and communicating personal information (e.g., finances, contact information, schedules, purchases, correspondence)
9_12.RI. Research and Information Fluency
By the end of 12 th grade each student will...
1. develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys)
2. identify, evaluate, and select appropriate online sources to answer content related questions
3. demonstrate the ability to use library and online databases for accessing information (e. g. MEL, Proquest, Infosource, United Streaming)
4. distinguish between fact, opinion, point of view, and inference
5. evaluate information found in selected online sources on the basis of accuracy and validity
6. evaluate resources for stereotyping, prejudice, and misrepresentation
7. research examples of inappropriate use of technologies and participate in related classroom activities (e.g., debates, reports, mock trials, presentations)
9_12.CT. Critical Thinking, Problem Solving, and Decision Making
By the end of 12 th grade each student will...
1. use digital resources (e.g., educational software, simulations, models) for problem solving and independent learning
2. analyze the capabilities and limitations of digital resources and evaluate their potential to address

personal, social, lifelong learning, and career needs
3. devise a research question or hypothesis using information and communication technology resources, analyze the findings to make a decision based on the findings, and report the results
9_12.DC. Digital Citizenship
By the end of 12 th grade each student will..
1. identify legal and ethical issues related to the use of information and communication technologies (e.g., properly selecting, acquiring, and citing resources)
2. discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society
3. use proper netiquette in communications
4. discuss the possible consequences of unethical uses of information and technologies
5. identify ways that individuals can protect their technology systems from unethical or unscrupulous users
6. create appropriate citations for resources when presenting research findings9_12.TC. Technology Operations and Concepts
7. adhere to fair use and copyright guidelines
9_12.TC. Technology Operations and Concepts
By the end of 12 th grade each student will...
1. complete at least one online credit, or non-credit, course or online learning experience
2. use an online tutorial and discuss the benefits and disadvantages of this method of learning
3. explore career opportunities and identify their related technology skill requirements
4. be familiar with a variety of emerging technology resources (e.g., podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, global positioning software)
5. identify an example of an assistive technology and describe its purpose and use
6. participate in a virtual environment as a strategy to build 21st century learning skills
7. routinely apply touch-typing techniques
8. assess and solve hardware and software problems by using online help or other user documentation
9. explain the differences between freeware, shareware, open source, and commercial software
10. participate in experiences associated with technology-related careers
11. identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav, wmv,mp3, flv, avi, pdf)
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
14. have access to and utilize assistive technology tools

Appendix B

Board Policy AUP

4510 Computer Network (Cf. 4520)

The Board authorizes the Superintendent to develop services linking computers within and between buildings in the District, the Lenawee Intermediate School District and to provide access to the international computer network (Internet) for students, staff and, if requested, members of the Board of Education. All computer network implementation shall be in line with the Board policy on technology and the District's educational goals.

Use of the computer network(s) as a part of any class or school assignment shall be consistent with the curriculum adopted by the District. The District's general rules for behavior and communications shall apply when using any computer equipment.

Personal Accounts

The Board authorizes the Superintendent to provide personal accounts for the instructional needs of students, staff, and, if requested, members of the Board, to access to the District computer network and the Internet, including electronic mail and file server space for developing and publishing material on the world wide web or other networked computer media. Such access shall be provided in furtherance of the District's educational mission, to enhance student knowledge of and familiarity with technology, and to facilitate communication, innovation, and sharing of resources. To ensure the integrity of the educational process and to guard the reputation of the District, student and staff expression in public electronic media provided by the school may be subject to review, comment, editing, and/or removal by school officials.

Personal accounts and all use of District computer resources are considered a privilege, not a right, and are subject to the District's rules and policies. Electronic communications and stored material may be monitored or read by school officials. Electronic mail in personal accounts will not generally be inspected by school officials without the consent of the sender or a recipient, except as required to investigate complaints that allege a violation of the District's rules and policies. Student electronic mail and electronic storage space that does not contain material made public by the student shall be subject to the District's policy and rules on student records.

A fee may be charged by the District to defray the cost of personal accounts. If a personal account is required for a core curricular class no fees may be charged of a student for the duration of that class.]

System Integrity

The Superintendent shall designate person(s) trained in computer technology to serve as the system administrators at the building and/or District level to implement the District's rules and regulations and to provide computer support for students, staff and Board members. The Superintendent in concert with the system administrators shall employ hardware and software security to ensure the integrity of the system and to prevent unauthorized access to District and school records.

4510 Computer Network

Network Use

The Superintendent shall develop rules and procedures for computer and network use, and shall see to it that rules are published annually for students, parents, guardians, staff, and Board members.

The District's computer and network use rules shall be consistent with the following requirements:

- Users may not use District equipment to perform or solicit the performance of any activity that is prohibited by law.
- Users may not use the system to transmit or publish information that violates or infringes upon the rights of any other person, or information that is abusive, obscene, or sexually offensive.
- The District computer equipment shall not be used for commercial purposes by any user, or for advertisement or solicitation without prior written approval from the Superintendent.
- Except with prior authorization from a system administrator or the owner of the record in question, users may not access or attempt to access the records or files of other users or of the District, nor delete, alter, or otherwise interfere with the integrity of computer-based information or resources.
- Users may not use the electronic mail facility to send unsolicited, bulk, chain, harassing, anonymous, or other messages which are an annoyance to the recipient or which may cause a degradation of system performance.
- Users may not use the network facility to access or bring into the school environment material that is inconsistent with the educational goals of the District, including but not limited to material which is defamatory, abusive, obscene, profane, sexually explicit, threatening, racially offensive, illegal, or which aids or advocates illegal activity other than non-violent civil disobedience.

District Web Page(s)

Any and all Web pages representing the District shall be carried and posted only on the District's server and shall be designed and published in accordance with rules promulgated by the Superintendent.

Limiting Access

The administration may make use of technology that attempts to block access by individual users to networked computers, data, or services that provide content that, in the opinion of the administration, is not in keeping with the educational aims of the District pursuant to state statute.

4510 Computer Network

Use of Computers in a School District Library

The Board, pursuant to state statute, requires when a school District library offers use of the internet or a computer, computer program, computer network, or computer system to the public, that access to minors be restricted in the following manner:

The District will utilize a system or method that is designed to prevent a minor from viewing obscene matter or sexually explicit matter that is harmful to minors. To accomplish this, a library may use passwords and/or filters that restrict internet access for those less than 18 years of age. The Superintendent will develop rules concerning library Internet access in compliance with state law.

Approved: November 11, 2002

LEGAL REF: MCL 397.606, amend. June 7, 2000

Technology Use/Internet Access

Computer use is a privilege. Furthermore, students should be aware that no expectation of privacy exists. Students are expected to use technology, which includes computers, software, media retrieval equipment, etc. for educational purposes only in an ethical and responsible manner. Misuse will result in disciplinary action that may include forfeiting the right to use any school technology.

The Madison Acceptable Use Policy places the following responsibilities on the user of school technology: (for a complete listing refer to Board Policy 4510)

- 1.) Each user is responsible for all material sent and received under his/her account.
- 2.) Users will accept the responsibility of keeping copyrighted software of any kind from entering the local area network via the Internet or modem. Consent by the technology administrator or building principal must be obtained before any software is installed.
- 3.) Users may not use File Transfer Protocol to access any inappropriate files, or files dangerous to the integrity of the local network or the Internet.
- 4.) It is the users' responsibility to maintain the integrity of the private electronic mail system and for making sure all e-mail sent and received by him/her does not contain inappropriate material.
- 5.) **Students are not permitted to use/visit social networking sites on school computers without permission. Such sites include, but are not limited to, MySpace, Facebook, & Bebo.**

Any violations of the use of school technology should be immediately reported to the teacher assigned to the user, technology facilitator, or administrator.