

**MSAD #53  
Burnham – Detroit – Pittsfield  
Technology Plan  
2010-2013**

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**MSAD #53 Technology Plan Mission**

The MSAD #53 technology plan is designed to provide vision and guidance to the district in establishing and sustaining a coordinated, PK-8 technology-enriched learning environment. The district recognizes that facility with technology is an essential skill for students to successfully navigate the information-driven society of the 21<sup>st</sup> century. A technology-rich learning environment is dependent on educators skilled in the use of technology and its educational applications, student-centered approaches to learning, access to contemporary hardware, software, and telecommunications networks, and ongoing financial and technical support.

## **1. Community and Parental Involvement**

MSAD #53 has an established Web site ([www.msad53.org](http://www.msad53.org)) used to communicate information about the schools to parents and community members. The Web site includes the district curriculum, policies, school calendar, school board information and meeting minutes, bus schedules, district news, and links to individual teacher Web pages with information about homework, curriculum, special projects, and useful resources. The site is updated regularly with news and information about special events. We view this Web site as an important communication tool with parents and community members. Parents communicate regularly with teachers through e-mail, as well. All classrooms have telephones.

The population of our communities is varied in terms of computer literacy and access at home. High-speed DSL and cable internet access is now available in Pittsfield. The Adult & Community Education Program offers computer literacy classes, as well as instruction in various applications. Offering technology classes in the Adult & Community Education Program encourages members of the community to develop their skill in computers and technology. Notices of these classes are published in local newspapers. Extra flyers are placed in various locations in the community for public awareness.

Parents are informed about technology and its use through parents' nights at the various schools, witnessing first-hand their children's use of technology to document meeting the standards of Maine's Learning results. Meetings specifically for parents of 7<sup>th</sup> and 8<sup>th</sup> grade students are held each fall to acquaint parents with the MLTI program and school policies regarding use of the iBooks. Parents are encouraged to support their children's responsible use of technology. Students share their technology learning with parents during student-lead portfolio conferences each spring. Student presentations using technology are a regular feature of School Board meetings.

## **2. Technology Vision**

The fundamental goal of technology in our school programs is to improve the quality of education by preparing students to meet the demands of the modern world. Our students are encouraged to be life-long learners who can communicate effectively through a variety of mediums, are skilled in problem-solving, able to transfer the skills they have learned to real life situations, and to work both independently and cooperatively using technology tools. Our students must be prepared for the challenges of the information age; our school system – teachers, administrators, and support staff – is obligated to prepare them.

Technology is an important part of any modern educational institution and will remain so for the foreseeable future. In order to prepare the students of MSAD #53 to become responsible and productive citizens, we must integrate technology sensibly and intentionally throughout the curriculum. Effective use of technology will provide opportunities to develop authentic technology applications in a student-centered approach to learning, promote teacher and student collaboration, heighten scientific inquiry, and

foster positive student attitudes and self-esteem. Students will be able to access, use, exchange and synthesize information gleaned from the use of technology so that they are able to create meaningful products with the technological resources available to them.

### **3. Technology Goals**

MSAD #53 believes that technology is a tool for learning, communicating, problem-solving and self-expression. Our K-8 Technology Curriculum reflects this belief. The curriculum details our performance indicators, NET Standards, and activities aligned to the Maine Learning Results.

Using technology tools and applications, students will:

- Demonstrate an understanding of ethical technology use and social implications of technology
- Make decisions about when to use technology
- Organize and express ideas
- Work independently and collaboratively
- Link to a global society
- Enhance creativity
- Develop presentation skills
- Access, use, exchange, synthesize, evaluate, and create information
- Develop technical skills for the workplace
- Solve problems

To support student outcomes, MSAD #53 will establish seamless integration of technology as a tool for daily student use by providing adequate hardware, software, and telecommunications access, professional learning opportunities for teachers, and implementation of the district technology curriculum. The district Technology Integrationist provides leadership and supports all classroom teachers to make the integration of technology possible. In addition to the district technology budget, grant funds will be sought to support professional learning opportunities and acquisition of new technologies. Specific action steps are detailed in the appendix of this plan.

#### **4. Necessary Technology**

Students in MSAD #53 have access to computers at all schools. Each PK-4 classroom has 2-6 student computers. Vickery Elementary school, housing grades 1-4 beginning in the Fall of 2010, has a 23-computer lab with laptops for students. Teachers all have laptops that are from 1-3 years old. There is a computer lab at Warsaw Middle School with 24 desk top computers. All 7<sup>th</sup> and 8<sup>th</sup> grade students are assigned a laptop through the MLTI. The 5<sup>th</sup> and 6<sup>th</sup> grade classrooms have laptops from the MLTI buy-out program, so that one-to-one computing has been achieved at the middle school. There is a K-8 computer technology curriculum, along with a skills checklist to monitor student progress. The Technology Integrationist works with teachers to ensure that all students use computers and other technology to learn the skills identified in the district curriculum. A full-time technology coordinator and part-time technology assistant are also employed by the district.

As multimedia applications become more routine we need to continue to purchase cameras, microphones, updated software, projectors, scientific peripherals, scanners and white boards to support teacher and student projects.

Software must be updated on a regular basis to provide students and staff with current resources. Adaptive software based on the principals of universal design will help to meet the needs of all students. As more teachers become comfortable with technology, more subject related applications may be requested.

Our schools currently access Internet and e-mail via MSLN with the middle school laptop users accessing via the MSLN wireless network. MSAD #53 plans its equipments needs based on a three-year revolving lease/purchase plan, which is current and serving the district well. Telecommunication services are sufficient. Wireless networks exist at all district facilities.

#### **5. Collaboration with Adult Literacy Service Providers**

The MSAD #53 Adult Education program offers courses in computer applications and use as the need or demand arises. These classes are held in the Warsaw Middle School computer lab. We also integrate computer usage into the GED program which utilizes our facilities. The local community does not have other adult literacy services.

## **6. Strategies for Improving Academic Achievement and Teacher Effectiveness**

### **6a. Student Academic Achievement Goals**

MSAD #53 believes that technology must be integrated across the disciplines. It is our goal that students be able to achieve the following outcomes:

- Use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer);
- Use technologies to retrieve, organize, manipulate, evaluate, communicate, and create information;
- Apply appropriate technologies to critical thinking, creative expression and decision-making;
- Employ a variety of approaches to technological solutions and processes to create, maintain and improve products, systems and environments;
- Apply ethical and legal standards in the planning, use, and evaluation of technology;
- Evaluate the societal and environmental impacts of technology;
- Become effective users of information.

A K-8 Technology Curriculum has been implemented. This curriculum is based on the National Technology Standards and the Maine Learning Results adopted by the State of Maine and MSAD #53. A student checklist assists us with the scope and sequence of this curriculum. All students are encouraged to include examples of the use of technology in their portfolios and projects.

### **6b. Teacher Effectiveness Goals**

In order for students to be successful with technology, MSAD #53 recognizes that students must be led by teachers who are interested and enthusiastic in, as well as skilled with, technology. Technology professional development is a primary goal for our district. Our goals for staff development include:

- Integration of technology into all curricular areas by all teachers;
- Development of an environment that supports problem solving skills, application of knowledge, hypothesis development and testing, pattern recognition, analytical thinking, information processing and assessment through technology;
- Awareness of resources such as hardware, software, Web sites, and distance learning capabilities;
- Proficiency in the use of the tools for word processing, database management and spreadsheet applications, and the student information system (Infinite Campus Fall 2010);
- Proficiency in the use of the tools and programs for creating multimedia presentations;
- Proficiency in the use of Web-based applications for reporting and assessment;

- Competency in computer-based technologies including telecommunications to access information and enhance personal and professional productivity;
- Incorporation of digital cameras, scanners, multimedia software, and other peripherals in their lessons;
- Ongoing evaluation of professional development needs.

We encourage staff to increase their levels of proficiency by attending workshops, conferences and taking classes. Professional development is provided on-site by MLTI trainers and our district Technology Integrationist. Several staff members participate in a professional learning group focusing on effective practices in integrating technology into the classroom. These opportunities are supported by professional development funds at the building and district levels, as well as federal grant monies.

The Technology Integrationist works as a partner with classroom teachers to ensure that students learn technology skills within the context of the subject curricula by suggesting projects and applications which enhance learning, and taking full advantage of district technology resources. The Technology Integrationist ensures that services are provided that directly assist students with disabilities to select, acquire or use an assistive technology device. The Library Media Specialist, Technology Coordinator, Technology Integrationist, and classroom teachers will collaborate regularly.

## **7. Integration of Technology with Curricula, Instruction, and Assessment**

MSAD #53 has integrated technology into the curriculum in varying degrees. Our elementary teachers are using technology in the classroom to help meet the needs of all our students whether it is to help students to master basic skills or to challenge those students who may already have mastered all of the basics. Our elementary students also have the opportunity to use technology to research and to create slideshows and documents. It should be noted that the level of integration of technology varies greatly depending on the skill level of the classroom teacher.

At the middle school, students in grades 4, 5 and 6 learn the basics of keyboarding, researching, desktop publishing and multimedia through integrated projects. Students in the 7th and 8th grades participate in the MLTI project. Students have access to a variety of software programs that allow them to research, collect and analyze data, create multimedia slideshows, word process, use desktop publishing, spreadsheets, graphing, and much more. Assistive technology is used to support students with visual or auditory disabilities.

Our expectations of teachers are that they will:

- Explore and use technology;
- Design, deliver, and assess student-learning activities that integrate technology into a variety of learning situations;
- Design student-learning activities that foster equitable, ethical, and legal use of technology by students;
- Practice responsible, ethical, and legal use of technology and software resources;

## MSAD #53 Technology Plan

- Utilize resources available to integrate technology into the curriculum;
- Become proficient at using the student information system (Infinite Campus) for attendance, grading, and assessment data management.

Our goal is seamless integration of technology to support instruction and implementation of the Maine Learning Results. Teachers are encouraged to plan and deliver instructional units that integrate technology. Lessons developed should reflect best practices for a diverse student population, as well as a variety of assessment tools. The district is currently implementing the NWEA as an assessment tool to help guide teachers in developing strategies to help students reach the next level of learning.

### 8. Hardware/Software Goals

See Appendix for complete timeline of hardware, software, instructional, and professional development goals.

Goals	Activities	Hardware/Software	Costs	Funding Sources
Provide and maintain laptop computers for all teachers and specialists: K and 1 (new) 2010	Purchase computers	Laptop computers	\$800 per computer	District budget
Provide and maintain six student computers per classroom, grades K-4	Purchase computers	Laptop or desktop computers	\$1200 per computer	District budget
Sustain one-to-one computing for all students 5-8	Purchase computers	Laptop computers	\$1200 per computer	District budget
Acquire additional electronic whiteboards for instructional purposes: 1 per grade level team for Vickery; 1 per teaching team for Warsaw	Purchase whiteboards  Train teachers in use of whiteboards	Whiteboards	\$1000 per board	District budget  Title IID technology funds  Grants
Acquire digital video and still cameras for each teaching/grade level team	Purchase cameras	Cameras	\$200 per camera	District budget  Grants

MSAD #53 Technology Plan

Acquire an LCD/multi-media projector and a visual presenter (e.g., ELMO) for each teaching/grade level team at Vickery; one per classroom at Warsaw	Purchase projectors	Projectors	\$800 per projector	District budget
Upgrade wireless connections in all schools, ongoing as needed	Purchase and install equipment	Wireless equipment	\$2000	District budget
Acquire assistive technology to support special needs students	Research and purchase appropriate hardware and software	Software Personal listening devices Audiobooks	\$1500 \$150 each \$30 each	Local Entitlement budget, technology grants
Continue to explore the uses of our Tandberg video-conferencing equipment	Research, professional development	Existing Tandberg equipment	N/A	N/A
Implement Infinite Campus student information system	Work with Department of Education to acquire system, upload data, and train employees	Infinite Campus	N/A	Supported by state funds

## **9. Supporting Resources**

MSAD #53 will acquire site licenses for appropriate software that will support the curriculum and instructional programs. Students and staff are using distance learning options, including the Tandberg equipment to access a high school math course for gifted/talented students, online graduate courses for teachers and administrators pursuing degrees and/or certification, the server based math fluency program, FASTT Math, used by all students in grades 4-8, and the online ALEKS math program for gifted/talented and Title I students. Students who use MLTI iBooks are learning to use a variety of programs and resources available through the MLTI. Staff receive training in the use of online databases supplied through the Maine State Library and in turn teach students to use these resources. A full-time Technology Coordinator and part-time Technology Assistant provide hardware and software support to all staff.

## **10. Steps to Increase Accessibility**

MSAD #53 continuously increases student and teacher access to technology. All Grade 7 and 8 teachers and students have the newest state-provided laptops. The older laptops have been redistributed to 3<sup>rd</sup> – 6<sup>th</sup> grade classrooms. The district has provided multiple opportunities for teachers to receive training in the effective integration of these laptops into the classroom. This has significantly impacted the integration of technology into the curriculum. Students are finding that technology can not only make learning more fun and more interesting, but also that it can facilitate access to information and allow for improved presentation of work. All classroom teachers have access to a computer, and the district continues to offer locally and through workshops off campus opportunities for teachers to increase their technology proficiency. District professional development funds as well as federal Title IID and Title VI funds are used to support staff development. Teachers and students have increasing access, as funding allows, to peripheral equipment such as scanners and digital cameras. MSAD #53 uses technology for district communications. A professional needs development survey will provide additional information for planning professional learning opportunities around technology. The Technology Integrationist will provide daily, on-the-spot support for teachers to integrate technology into the curriculum and to support student learning using technology. Federal E-Rate funds are used to support telecommunications access, specifically, telephone service, for classrooms.

## **11. Promotion of Various Curricula and Teaching Strategies that Integrate Technology**

MSAD 53 has demonstrated its commitment to technology by continually improving/updating hardware and software and by providing regular professional development opportunities for teachers. To assess our strengths and weaknesses, the MSAD 53 technology team will conduct a staff survey to assess the technology skills/needs of the staff. MSAD 53 has dedicated professional development time and money to provide opportunities for teachers to become more comfortable/skilled with using technology in the classroom.

MSAD #53 has established the position of a Technology Integrationist whose role is to continually work with teachers to develop their skills and expertise incorporating technology into the curriculum. The Integrationist has taken the initiative to develop and lead a program that will promote technology as an educational resource to be used in the classroom. The Integrationist will continue to help staff to consider and choose technologies to help improve/enhance curriculum, instruction, and student learning. The Integrationist will also assist students and teachers when projects or lessons may require extra technical assistance.

## **12. Professional Development**

MSAD #53 continually seeks to ensure that all of its staff is technology literate. Through regular staff development needs assessments and evaluations, and through staff professional goal-setting, the district develops and provides or makes available to staff, professional learning opportunities that meet both district needs in terms of providing the best possible instruction for students and meet individual staff needs as they continue to improve their instruction. Technology trainers from the MLTI program have worked with middle school staff on several occasions on-site, and several teachers have attended other MLTI training opportunities. These teachers have in turn provided training to their colleagues during in-service sessions. Federal Title IID funds have supported training teachers to create classroom Web pages for the district Web site and training elementary teachers in use of laptops. The Technology Integrationist provides continuous support to staff on an informal basis. The Curriculum Specialist seeks and then makes staff knowledgeable about technology professional training opportunities. A professional learning group focused on technology integration supports several staff members.

MSAD #53 staff are active in their pursuit of improved technology skills for themselves and their students. It is part of the district's strategic plan to ensure its students are continuously improving and prepared to meet the ever-changing demands of the 21<sup>st</sup> century.

## **13. Innovative Delivery Strategies**

In collaboration with several other school districts, MSAD #53 applied for and received a Federal RUS grant through the Department of Agriculture which provides equipment for teleconferencing, distance learning, electronic field trips, and staff development Webinars. We will continue to explore and expand the uses of this

equipment. As noted above, we have implemented the server-based math computation program, FASTT Math, and the online math program ALEKS. Students are highly engaged and motivated by these programs. We will continue to seek out innovative curriculum resources.

#### 14. Accountability Measures

Accountability measures are listed under EVALUATION in the chart in APPENDIX I.

### APPENDIX I : Three Year Plan for Implementation of Technology with Timeline

MSAD #53			
Three Year Plan for Implementation of Technology			
Goal	Person(s) Responsible	Time Frame	Evaluation
Establish seamless integration of technology as a tool for daily student use	Curriculum Specialist Classroom Teachers Technology Integrationist	Ongoing	Curriculum checklist Classroom observations Teacher lesson plans
Continue to fully implement and refine the district technology curriculum	Classroom Teachers Technology Integrationist Curriculum Specialist	Ongoing	Technology curriculum checklist Local assessments
Provide six student laptop computers per classroom, grades K-4	Technology Coordinator	2011-2012	Visual inspection/inventory
Maintain a dedicated computer lab at Vickery School	Technology Coordinator and Technology Assistant	Ongoing maintenance and upgrades as needed	Visual inspection/inventory
Sustain one-to-one laptop computing for all students grades 5-8	Technology Coordinator and Technology Assistant	2010-2011 and ongoing	Visual inspection/inventory
Provide ongoing professional development for all teachers in technology use and curriculum integration	Curriculum Specialist Principals Technology Staff	Ongoing	Professional development evaluations
Acquire additional electronic white boards for instruction in classrooms: 1 per grade level team for Vickery and 1 per teaching team for Warsaw	Technology Coordinator	2010-2013 and ongoing	Visual inspection/inventory
Acquire and maintain a digital camera for each teaching/grade level team	Technology Coordinator	2010-2013	Visual inspection/inventory
Acquire an LCD/multi-media projector and visual presenter for each teaching/grade level team	Technology Coordinator	2010-2013	Visual inspection/inventory
Reduce our reliance on paper by	Staff/Teachers	2010-2013	Documented procedures;

MSAD #53 Technology Plan

working toward a paperless system for student work sent to teachers	Technology Integrationist Technology Coordinator		reduction in paper used
Maintain a schedule for ongoing acquisition and upgrades of hardware, software, and infrastructure, built into the district budget and scheduled on a timeline	Administrators Technology Coordinator	Ongoing	Timeline or schedule available
Seek grants to support the technology plan	Curriculum Specialist Development Team	Ongoing	Submitted Grants Expenditures of Approved Grants
Apply for E-Rate for telecommunications and other eligible needs for the implementation of technology in the district	Curriculum Specialist Business Office Staff	2010-2013	Completed/Submitted Applications and Reimbursements