

**MSAD #53**  
**TECHNOLOGY PLAN**  
**Revised 2004**

**Contact**

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## **Technology Mission Statement**

The Technology Mission of MSAD #53 is to design and implement a program that ensures equity and increased access to the Internet and electronic technology in the schools and communities of Burnham, Detroit and Pittsfield. MSAD #53 recognizes that we must implement an information-based inquiry process, which meets the demands of a global society.

We want our students to acquire the academic and life skills they need to be successful, and have practical opportunities to use, apply and integrate them into the fabric of their daily lives for problem solving, adapting to change as individuals and citizens. They need to become contributing and intellectually active members of our society with an understanding of community values, democratic principles, and social justice, which can all be tied into technology.

## Community

The communities of Burnham (population 1141), Detroit (population 810), and Pittsfield (population 4241) support three (3) elementary schools and one (1) middle school. High School students are tuitioned to a local private high school. MSAD 53 has 453 students at the preK-4 level and 375 at the middle school level. Approximately 42% of our students receive free or reduced lunch.

Several small manufacturing companies, one large contractor and a hospital provide the business base for our communities. Agriculture, small businesses and services, and individual enterprises round out the economic base.

Recreational activities center on athletic or outdoor activities. There is a public golf course and a local ski slope. A community chorus, a town-owned and operated movie theater, and occasional coffee house provide musical entertainment, in addition to cultural events offered through schools and area churches.

The Pittsfield Public Library serves approximately 2,000 active card holders. The library holds 21,000 volumes with access through a computerized catalog system. Access to the Internet and popular applications is available to the public from four terminals located in the library. A capital improvement campaign is being conducted from 2004-2007 in order to expand the library to include more room for books, meeting rooms, computers, etc.

Students in the district do have access to computers at school. All K-8 classrooms have two (2) or more computers. There is a computer lab at Warsaw Middle School with 24 computers and a mobile lab in grades 2-4 at the Vickery School with 17 laptops. All seventh and eighth grade students are assigned a laptop through the MLTI initiative. The Special Education department shares several AlphaSmarts. There is a K-8 Computer Technology Curriculum, along with a checklist to monitor student progress. Currently the computer teacher has classes for grades 4-8 at Warsaw Middle School. Students get direct instruction in the computer lab as part of their allied arts rotation. A Technology Coordinator is also employed by the District.

**The population of our communities is varied in terms of computer literacy and access at home. The Adult & Community Education Program offers computer literacy classes, as well as instruction in various applications. Community members and students have access to the computers in the computer lab and use of the school library at the middle school two (2) evenings a week. Approximately eight or more people use the facilities on any given night.**

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

We have now established a regular schedule for opening the computer lab to our community. Adults and students in our community have access to computers in a supervised lab two (2) evenings a week. Parents of district school students have been notified of lab availability, and other community members have learned of it through the public library, town offices, district and community publications, and word of mouth.

Offering technology classes in the Adult & Community Education Program also encourages members of the community to develop their skill in computers and technology. Notices of these classes are mailed to all homes in the school district. As well, the schedule is published in local newspapers. Extra flyers are placed in various locations in the community for public awareness.

The district continues to seek funding in creative and innovative ways in order to fund additional ways to better promote community and parental involvement and improve communication with parents. Recently, for example, the district has submitted a proposal for the 21<sup>st</sup> Century Learning Centers grant which, if awarded, would allow the district to offer both technology and literacy classes to parents free of charge. This would facilitate informing parents about the technology and its proper use by giving them direct experience. Currently, through parents' nights at the various schools, parents are informed about the technology and its use, witnessing first-hand their children's use of technology to document meeting the standards of Maine's Learning results.

## **2. Technology Vision**

Technology is a tool necessary to maximize learning in every curriculum at every level of instruction. It is our belief that all learners empowered by independent and group use of computers, as well as other technologies, need to cooperate to share resources and communicate in a global community. We further believe that providing staff with the ability to network and communicate with other educators, and access online information sources will result in better teaching and learning in our district.

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, and able to transfer the skills they have learned to real life situations. They need to work independently and cooperatively, utilizing the technological skills necessary to be successful in the future. All students must have basic technological skills. All adults in the modern world must be able to use technology in their day-to-day personal lives: electronic shopping, banking,

travel planning, purchasing, and similar transactions are accepted modes of activity. Our students must therefore be prepared for these realities, and our school system – teachers, administrators, and support staff – is obligated to prepare them. An important component of our plan is to also provide our communities with access to technology through the schools, and offer instruction to adults in support of life-long learning.

**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 Burnham, Detroit and Pittsfield to become responsible citizens, we must integrate technology sensibly and intentionally throughout the curriculum, which has been aligned to the Maine Learning Results. Effective usages of technology will provide opportunities to develop real-world curricular content, promote teacher and student collaboration, heighten scientific inquiry, foster positive student attitudes and self-esteem. Students will be able to collect, exchange and synthesize information gleaned from the use of technology so that they are able to create meaningful products with the electronic resources available to them.**

### **3. Technology Goals and Objectives**

MSAD #53 believes that technology is a tool for learning, communicating, problem solving and self-expression. Our K-8 Technology Curriculum reflects this belief. This plan details our Performance Indicators, NET Standards and Activities which are all aligned to the Maine Learning Results. In addition, teachers use a Technology Skills Checklist to track individual student progress.

Technology goals include:

- ❖ **Student Outcomes (See 6a; 11; APPENDIX I)**  
...to establish K-8 electronic portfolios which will be used for assessment and student led conferences.
- ❖ **Technology Integration.**  
...to have teachers incorporate technology into their regular instructional routines so that students view technology as another tool they can competently use.  
...to utilize iBook resources to their full potential at Warsaw Middle School.
- ❖ **Professional Development (See 6b; 12; APPENDIX I)**  
...to provide on-going staff development on the integration of technology into the curriculum, uses of multimedia, designing web pages, using Internet resources, and the effective use of laptops in the classroom and instructional programs of students.
- ❖ **Community Collaboration (See 5; APPENDIX I)**

...to develop the schools as a community learning center. [This is also a goal of the district's strategic plan.]

❖ **Hardware/Software (See 8; APPENDIX I)**

...to improve the mobile lab at Vickery School.

...to add mobile labs at Manson Park and Burnham Village Schools.

...to establish wireless connections in all district schools.

...to continue to apply for E-Rate funding for telecommunications and other sources of funding for technology in the district.

...to purchase electronic white boards for use in classroom instruction.

...to purchase and/or design software programs which will help record local assessment data, track student assessments, and to use this assessment information to assist teachers and schools in changing instructional practices to meet students' needs, i.e., to inform instruction, and communicate data to the state.

...to seek a new three-year lease-purchase agreement for sixty-five (65) computers in the four district schools.

All goals are listed and clearly stated with their timelines in a chart at the end of this document, as well as incorporated into the other sections of this document

#### 4. Necessary Technology

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

Software must also be updated on a regular basis to provide students and staff with current resources. Adaptive software to meet the needs of all students should be researched and purchased. As more teachers become comfortable with technology subject related applications will be required.

Our schools currently access Internet and e-mail via MSLN with the middle school laptop users accessing via the MSLN wireless network. Our goal is to have the computer lab access be wireless and eventually to have wireless access throughout the district.

The computer lab at the middle school needs to be relocated to provide adequate space for equipment and students. The workstations need to be redesigned to meet acceptable ergonomic standards. An ADA approved workstation should also be provided. This will require funding for wiring and equipment. At the elementary schools computer labs must be on traveling carts due to space constraints.

MSAD #53 plans its equipments needs based on a three-year revolving rental plan, which is current and serving the district well. In so far as telecommunication services are concerned, MSAD #53 is well-equipped. Wireless networks exist at Warsaw Middle School and Vickery Elementary School, and the district continues to seek grants monies to install such systems in its other two elementary schools.

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

MSAD #53 already collaborates effectively with Adult Literacy Service Providers. The district maintains an open computer lab at the Warsaw Middle School two evenings a week for use by the community. In addition, the computer lab is always open in the evenings, when not being used for computer classes, to members of the adult education community. Finally, through the adult education program, computer classes are offered.

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

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

MSAD #53 believes that technology must be integrated across the discipline areas. 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 and communicate 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, usage and evaluation of technology
- ❖ Evaluate the societal and environmental impacts of technology
- ❖ Become effective users of information

A new K-8 Technology Curriculum has been implemented. This curriculum is based on the Maine Learning Results and the National Technology Standards adopted by the State of Maine and MSAD #53. A student checklist has also been developed and adopted which will assist us with the scope and sequence of this curriculum. Students are encouraged to include examples of the use of technology in their portfolios, which are used in Student-Led Conferences. The Library Media Specialist continually accepts and evaluates electronic information.

Curricula in MSAD #53 are either aligned with or are in the process of being aligned with the Maine Learning Results. Teachers and/or students are encouraged to incorporate technology into projects as lessons are being developed. In order to encourage and assist all teachers to effectively use technology in their classrooms and to develop electronic portfolios, our district needs a Technology Integration Specialist. The Technology Integration Specialist will work as a partner with classroom teachers to make sure students learn technology skills within the context of the subject curricula by suggesting projects and applications which enhance learning, and take full advantage of district technology resources. The Technology Integration Specialist will ensure that services are provided that directly assist students with disabilities to select, acquire or use an assistive technology device.

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

In order for students to be successful in technology, MSAD #53 recognizes that that must be led by teachers who are interested and enthusiastic in as well as skilled in 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
- ❖ Awareness of equipment, supplies, software, programs, etc which will help staff to feel comfortable and be knowledgeable about the incorporation of technology into their classroom
- ❖ Proficiency in the use of the tools for word processing, database management and spreadsheet applications
- ❖ Proficiency in the use of the tools and programs for creating multimedia presentations
- ❖ Competency in computer-based technologies, including telecommunications to access information and enhance personal and professional productivity
- ❖ Incorporation of digital cameras, scanning, multimedia software, etc. in to lessons
- ❖ Ongoing evaluation of professional development needs

We are encouraging staff to increase their levels of proficiency by attending workshops, conferences and taking classes. This is supported by professional development funds at the building and district levels, as well as NCLB and PPPD grant monies. Additionally, the Library Media Specialist and

Computer Technician collaborate regularly.

College level classes are provided to all staff through the American Creative Institute for Education (AICE). These classes are also offered to members of our community, as well as other school districts. Each year, two (2) different classes have been provided to staff in the Warsaw Middle School Computer Lab.

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

MSAD #53 has integrated technology into the curriculum. Our middle school students are using technology for research, collecting and analyzing data, creating multimedia slideshows, designing web pages, as well as word processing, database and spreadsheet applications. The elementary students have access to computers in each classroom, which are networked for Internet usage. Software is now being used to develop independent skills and for the writing process. Assistive technology devices will be utilized to improve the functional capabilities of students with disabilities.

Our goal is to have all teachers use computers and related technologies to support instruction in their grade level and/or subject area. They are being encouraged to plan and deliver instructional units that integrate a variety of software, applications and learning tools. Lessons developed should reflect effective lesson planning for a diverse student population, as well as a variety of assessment tools.

We want our teachers to:

- ❖ Explore, evaluate, and use computers/technology resources, including applications, tools, educational software and associated documentation.
- ❖ Describe current instructional principles, research, and appropriate assessment practices as related to the use of computers and technology resources.
- ❖ Design, deliver, and assess student-learning activities that integrate computers/technology for a variety of student group strategies and for diverse populations.
- ❖ Design student-learning activities that foster equitable, ethical and legal use of technology by students.
- ❖ Practice responsible, ethical and legal use of technology, information and software resources.

It is the goal of MSAD #53 to develop an integrated technology program, which will implement the Maine Learning Results while taking full advantage of the resources available to us. Our Social Studies, Science, Math, Health, Language Arts, and Career Education curricula are being updated and are aligned to the Maine Learning Results. Work is now being done in the areas of Visual and Performing Arts, and Physical Education to do the same. As technology has become more available throughout the district, our teachers are looking for ways to strengthen their curricula using technology as a resource. Some examples of current practices of this include:

- ❖ “Clear and Effective Communicators” in written, visual, artistic, oral, and technological modes of expression.
- ❖ “Self-Directed and Life-Long Learners by discovering how to locate and utilize information from libraries, electronic data bases, web sites, and other technological resources.
- ❖ “Creative and Practical Problem Solvers” by learning how to design strategies for data collection and analysis.
- ❖ “Responsible and Involved Citizens” by recognizing and understanding our society’s diverse knowledge and opinions available via the Internet and adhering to the Acceptable Use Policy.
- ❖ “Integrative and Informed Thinkers” by learning to evaluate the reliability of sources and producing cross curricular projects.

The integration of technology in social studies, math and science has already begun with successful student products, the result of teachers modeling. MSAD #53 intends to continue this trend.

## 8. Hardware/Software Goals

We are in the second year of a “lease to purchase” program. Our goal is to provide updated computers for our lab every three years with the previous generation of computers being added to classroom clusters, allowing outdated computers to be retired. We also need to have enough laptops in the elementary school mobile labs to provide one-on-one computing for any class. The preK-4 buildings are also on a regular replacement rotation. **(Also See Section 3, chart with timeline in Appendix I)**

GOAL	Activities	Hardware/ Software	Costs	Funding Source
...to improve the mobile lab at Vickery School.	Purchase additional computers	*computers	\$1200 per computer	Budget; NCLB, Title IID; E-Rate
...to add mobile labs at Manson Park and Burnham	Purchase equipment for mobile units	*computers	\$1200 per computer x 20 per	Budget; NCLB, Title IID; E-Rate;

Village Schools.		*recharging cart	school \$650	New grants
...to establish wireless connections in all district schools.	Install infrastructure Purchase cards	infrastructure cards	\$2250 \$50 per computer	Budget; NCLB, Title IID; E-Rate; New grants
...to continue to apply for E-Rate funding for telecommunications and other sources of funding for technology in the district.	Research and apply for appropriate grants; grant- writing training	workshops and publications	\$1000 per year	Budget; NCLB Titles IIA and IID; New grants
...to purchase electronic white boards for use in classroom instruction.	Purchase white boards	Electronic whiteboards	\$900	Budget, New grants
...to purchase and/or design software programs which will help record local assessment data, track student assessments, and to use this assessment information to assist teachers and schools in changing instructional practices to meet students' needs, i.e., to inform instruction, and communicate data to the state.	Purchase software  Provide training	Software  Workshops	\$500  \$2000	Budget; NCLB Titles IIA and IID; PPPD; New grants
...to seek a new	Renegotiate	Lease-	\$75,000	Budget

three-year lease-purchase agreement for sixty-five (65) computers in the four district schools	or renew lease-purchase agreement	purchase agreement		
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## 9. Supporting Resources

MSAD #53 plans to continue to acquire site licenses for various software that can and will support the curriculum and the instructional programs offered by the district [i.e., stop motion software, presentation software (for student laptops), etc]. In addition, it will continue to pursue distance learning options for both staff and students, as well as add to the professional and student library printed sources that can facilitate the acquisition and development of technology skills.

## 10. Steps to Increase Accessibility

MSAD #53 has taken numerous steps toward increasing student and teacher access to technology. All Grade 7 and 8 teachers have state-provided iBooks. The district has provided opportunities for teachers to receive training in the effective integration of these laptops into the classroom. This has significantly altered – in a positive way – the ways classes are conducted. These 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. In addition, all classroom teachers have access to either a PC or iBook, and the district continues to offer locally and through workshops off campus opportunities for teachers to increase their technology proficiency. Staff and students have increasing access, as funding allows, to technology equipment such as scanners, digital cameras and videos, etc. MSAD #53 uses technology for district communications.

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

MSAD #53 has a Curriculum Specialist who continually researches technology integration as well as state-of-the-art curriculum and instruction findings. As she researches this information, she provides staff with regular updates via email or hardcopy reprints. Further, the district offers ample opportunities for staff to seek additional training in this area and, in turn, share their new knowledge with colleagues. Opportunities exist within the various schools for professional read-shares.

## 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 development 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. The district has and will continue to send staff to INTEL train-the-trainer workshops through which teachers have returned to the district to offer the same training on technology integration to their colleagues. All math and science teachers participated in an online Survey of Enacted Curriculum sponsored by the Maine Math and Science Alliance and will receive training in how to access this data on line and how to make best use of it to inform their instruction. In 2003-04, a middle school team of teachers piloted iBinder!, an online lesson planning tool for aligning lesson with Maine's Learning Results. The administrative team and its support staff are currently involved in training for File Maker Pro. The Curriculum Specialist seeks and then makes staff knowledgeable about technology professional training opportunities.

MSAD #53 staff is active in its 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**

For MSAD #53 students, at this point, budget restrictions inhibit its ability to do more in this area. While some teachers participate in distance learning courses, and some classes participate in key-pal programs, there is no formal program for this in the district at this time. MSAD #53 is committed to innovation and will continue to pursue creative ways to fund such activities, increasing the ability of teachers to effectively individualize instruction and meet the needs of all students as they work to meet Maine's Learning Results.

### **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**

<b>Goal</b>	<b>Person(s) Responsible</b>	<b>Time Frame</b>	<b>Evaluation</b>
Improve the mobile lab at Vickery School (Grades 2-4)	Administrative Team School Board	2005-2006	School Board Minutes Budget Approval Class Schedules
Add a mobile lab at the Manson Park School and Burnham Village School (Grades K-1)	Administrative Team School Board	2006-2007	School Board Minutes Budget Approval Class Schedules
Restructure the computer/technology teacher's job into a technology integration specialist	Administrative Team School Board Technology Integration Specialist	Contingent upon technology instructor becoming available for PreK-4	Class Schedules MSAD #53 Technology Checklist
Establish wireless connections in all district schools	Administrative Team Technology Coordinator	2006-2007	Budget Approval Purchase Orders Buildings will be wireless
Provide on-going professional staff development on integration of technology into the curriculum, uses of multi-media, designing web pages, internet resources, how to use laptops effectively, etc.	Staff Administrative Team Technology Coordinator Technology Integration Specialist	2004-2007	Budget Approval Team Meetings Professional Projects Students Projects Evaluations
Establish K-8 electronic portfolios which will be used for assessment and Student	Technology Coordinator Curriculum Specialist Technology Integration	2005-2007	Professional Development Staff Meetings Electronic Portfolios

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Led Conferences	Specialist Staff		Staff/Parent/Student Evaluations after Student Led Conferences
Purchase additional scanners, digital cameras, digital camcorders, writeable disks, multi-media projectors, CD burners, printers, microphones, software, science peripherals, etc.	Technology Coordinator Technology Integration Specialist Administrative Team School Board Library Media Specialist	2004-2007	Budget Approval Purchase Orders
Seek grants to purchase technology equipment and provide professional development opportunities	Administrative Team Technology Coordinator	2004-2007	Submitted Grants Expenditures of Approved Grants
Apply for E-Rate for telecommunications and other needs for the implementations of technology in the district	Administrative Team Technology Coordinator	2004-2007	Completed/Submitted up to and including FY 2004-05 Application Reimbursements
Purchase electronic white boards to be used for instructional purposes in various classrooms	Curriculum Specialist Principals Teachers School Board	2005-2007	Budget Approval Purchase Orders Observation of Teacher's Use Teacher Evaluation
Purchase and/or design software programs which will help us record local assessment data, track student assessments, and to use this assessment information to assist teachers and schools change instructional practices to meet students needs and communicate data to state	Administrative Team Teachers Technology Coordinator	2004-2007	Assessment Data Software Purchase Orders
Seek a new three (3) year lease/purchase agreement for sixty-five (65) computers in our four (4) schools	Administrative Team School board Technology Coordinator Technology Integration Specialist	Summer 2005	Budget Approval Signed Purchase to Lease Agreement Computers Located in Schools
Utilize iBook resources to their full potential at Warsaw Middle School	Principals Staff Technology Coordinator Library Media Specialist	2004-2007	Reports for the Maine Department of Education Observations of Student/Teacher Use Student Projects

