

**Maine School Administrative District #41
Technology Plan**

2007-2010

**Contact Edie Miles
emiles@sad41.org**

1. **Community and Parental Involvement** – Involve a broad representation of the school community in the planning process. Include a description of how the technology will be used effectively to promote community and parental involvement and increase communication with parents, including a description of how parents will be informed about the technology and its proper use.

The MSAD #41 Technology Committee is open to district administration, teachers, students, parents, school board members and community members. All are invited and encouraged to attend meetings that are held quarterly as a minimum or as needed. Minutes of each meeting are posted on the school website located at: <http://www.msad41.us/technology.html> Minutes are also sent to individual school, district, and board folders on FirstClass email so that any school member can read the minutes and become involved in creating and implementing the district technology plan.

Current Active Members

Chris Beres	Principal, Brownville Elementary
Dylan Flagg	Student, Penquis Valley
Scott Gordon	Principal, Penquis Valley
Nancy B. Grant	Information Technology, Penquis Valley
Tina Johnston	Marion C. Cook School, LaGrange
Cathy Knox	Supervising Principal, Milo Elementary
John T. Leonard	Technology Coordinator, Penquis Valley
Eddie Miles	Director of Instructional Technology K-12
Andrea Mills	Teacher, Milo Elementary
George Morse	Technology, K-6
Clay Savage	Assistant Principal, Penquis Valley
Jason Shaffer	Student, Penquis Valley
Carol Smith	Teacher, Penquis Valley
Heather Webb	Teacher, Penquis Valley
Lynn Weston	Teacher, Brownville Elementary
Ken Worster	Teacher, Penquis Valley
Shirley Wright	Superintendent, MSAD #41

The district website is updated weekly and includes a community calendar linked off the main page as well as other links to information about our schools and district. There will be at least six community presentations including fall and spring presentations updating parents on iBook use and Maine Learning Technology Initiative. Students will exhibit their technology use at special presentations to their schools, school board and communities. Student iTeams, under the supervision, will hold monthly technology demonstrations in the Penquis Valley Cafeteria before basketball games until half time during the basketball season. Community members will have the opportunity to ask questions, try new technology and volunteer to be members of the technology committee. Community members will also have access to technology workshops and adult education classes.

Staff will utilize technology in presentations and post homework online to communicate with parents/guardians and community members. The Director of Instructional Technology will send technology updates in monthly reports to school board members. Schools will collect parent and community email addresses in order to send out information school newsletters and cyber safety flyers. The Internet Acceptable Use Policies and rules will be sent home with students and posted with all of the district policies on the district website at <http://msad41.us/board.htm> . A Technology Report is included in the Annual School Budget booklet.

The M.S.A.D. #41 Director of Instructional Technology is an i-SAFE Certified Trainer (Appendix C) and is responsible for delivering internet safety content to K-12 classrooms and providing Internet Safety resources for parents. In addition to iSafe, the district utilizes a variety of Internet Safety resources including NetSmartz, WiredKids and StopBullyingNow.

Students in grades 7 and 8 will be taking their iBooks home starting in the fall of 2007. Most of the district has access to only dial-up Internet. We would like to see high speed Internet available to everyone in the district and will continue to work toward that goal.

<i>Expected Outcome</i>	<i>Activity</i>	<i>Who is Responsible</i>	<i>Timeline</i>
Increased Community involvement	Technology demonstrations, parent meetings, school board reports and meetings	iTeams, staff and technology director	Ongoing 2007-2010
Internet Safety Awareness	Parent meetings, flyers, classroom presentations	Guidance, staff and technology director	Ongoing 2007-2010 Increase awareness and protect students
Update community on MSAD #41 activities and events	Updated website, emails, newsletters	Staff, principals, technology director	Ongoing weekly Community can easily access event information and find district contact information.
Parents/guardians will have access to homework assignments.	Teacher homework assignment pages added to MSAD #41 website.	Technology Director will establish pages and do a “dine and discuss” training for teachers.	Fall 2007
90 percent of all households will have access to high speed Internet	Explore options for delivering broadband Internet to all members of the community.	Administration, Town officials, Technology personnel	By Spring of 2010

2. **Vision** - Establish a vision statement linking the tools of technology with areas such as curriculum content, instructional practices, professional development strategies, and enhanced services.

MSAD #41 Technology Vision Statement

Our vision is to provide students and staff with equal access to technology tools, training, instruction and evaluation. Our learning community will gain technology skills needed to be lifelong learners and responsible informed citizens able to compete in a global economy.

3. **Goals** – Articulate specific goals, aligned with the Maine *Learning Results*, for using advanced technology to improve student academic achievement.

1. Students will have full access to technology skills and equipment for developing an electronic portfolio that documents how they meet the standards in the Maine Learning Results.

2. Students will become technology literate in:

- a. Determining the need for information
- b. Accessing information
- c. Evaluating the reliability of information sources
- d. Synthesizing and using information
- e. Collaborating with a wide variety of ages and cultures
- f. Communicating in a safe manner
- g. Producing and sharing creative products in a variety of appropriate formats

3. Student iTeams will be developed and supported in grades 5-8.

4. Students, staff and the community will use the ATM and other technologically accessed instruction beyond the school district.

5. Teachers will follow best teaching practices, the MLTI best practices, and the ISTE standards when teaching with technology.

6. Teachers will:

- a. Support student directed learning using technology.
- b. Add one technology tool for communicating with students, parents and/or community.
- c. Use at least one technology based assessment tool to improve classroom instruction.
- d. Learn at least one “new-to-them” technology tool (software or hardware) each year.
- e. Provide students with the support to develop an e-portfolio.
- f. Collaborate with other staff in technology use.

7. Administration will support, encourage, and assess technology use in the schools.

8. The school district will fund the technology infrastructure and educational pieces.

9. The school district community will have access to the school and its resources through technology.

10. The school district community will have access to high speed Internet.

<i>Expected Outcome</i>	<i>Activity</i>	<i>Who is Responsible</i>	<i>Timeline</i>
1. Digital Portfolios.	Necessary technology in place. Staff and student training.	Students, staff, administration	A digital portfolio will replace the paper version of the Penquis Exit Portfolio for students graduating in 2010
2. Students will become technology literate.	a. Determining the need for information b. Access information c. Evaluate the reliability of information sources d. Synthesize and use information e. Collaborate with a wide variety of ages and cultures f. Communicate in a safe manner g. Produce and share creative products in a variety of appropriate formats	Library media specialist, staff and administration	Ongoing 2007-2010
3. Successful Student iTeams grade 5-8	Students will learn to troubleshoot and help in classrooms, attend meetings and workshops and take part in community presentations	Staff and technology director	Begin in the Fall of 2007
4. Increased use of ATM and other technologically accessed instruction.	Increase use of ATM room to 6 periods each day (75% capacity) and use after school hours.	Administration, technology department, community, guidance, adult education	Spring 2009
5. Best teaching	Teachers will follow	Administration, staff	Ongoing.

practices when teaching with technology.	MLTI best practices, and the ISTE standards	technology surveys done by technology director.	
<p>6. Teachers will show growth in using and integrating technology in their classrooms.</p>	<p>a. Support student directed learning using technology. b. Add one technology tool for communicating with students, parents and/or community. c. Use at least one technology based assessment tool to improve classroom instruction. d. Learn at least one “new-to-them” technology tool (software or hardware) each year. e. Provide students with the support to develop an e-portfolio. f. Collaborate with other staff in technology use.</p>	<p>Teachers, administrators, technology director</p>	<p>Ongoing All teachers will show growth yearly using self-assessment, technology goals and teacher competencies.</p>
<p>7. Administration will support, encourage, and assess technology use in the schools.</p>	<p>The school district will finance the infrastructure and support the educational pieces by maintaining 2 technology positions (one at K-6 and one at 7-12) and a district-wide director of instructional technology</p>	<p>Under direction from administration, the technology director, will assess equipment needs and skills in the district and make recommendations. Each of the technology people will provide support for hardware, software and infrastructure necessary.</p>	<p>Ongoing. Teachers are assessed yearly including a self-evaluation and technology survey. All teachers will be at Level 3 technology skills (to be revised by the technology committee in 2008) by Spring 2009.</p>

8. The school district will fund the technology infrastructure and educational pieces.	Acquire funding to provide necessary hardware, software and training to support technology in the district.	Administration will support raising money for technology through local and state funding as well as grants	Ongoing.
9. The school district community will have access to the school and its resources through technology.	School programs and demonstrations, website, adult education classes	Administration, adult education, school district technology committee.	Ongoing
10. High Speed Internet available to 90% of all households in the communities.	Explore collaboration with towns to provide access to high speed Internet.	Technology director and town officials.	High speed Internet available to all communities by Spring 2010.

4. Identify Necessary Technology – Include a technology assessment. Gather information about technology currently in use so that what will be needed to meet new goals can be determined. Include a list of the equipment and telecommunication services that are necessary to reach the goals.

K-6 Inventory June 5, 2007	
<i>Item</i>	<i>Quantity</i>
Apple iBooks	168
Apple iMacs	46
Alphasmarts	44
Overhead Projectors	26
eMacs	22
Apple Airport Base Stations	10
Televisions	9
VCRs	9
24 Port Hub/Switch	8
LCD Projectors	8
Mobile Laptop Carts	7
8 Port Hub/Switch	5
Digital Cameras	5
TV/DVD/VCR Combos	5
Video Cameras	5
15" monitors	4

17" monitors	4
Cisco Routers	3
Imation Superdisks	3
APC UPS (Battery Backup)	2
Apple PowerMac G5 Desktops	2
DVD Players	2
Flatbed Scanners	2
HP Laser Printers	2
KVM Switches	2
Pioneer LaserDisc	2
VCR/DVD Combos	2
16 Port Hub	1
5 Port Hub	1
Apple Monitor	1
Paradyne CSU/DSU	1
PowerMac G3 All-in-One	1
Toshiba laptop	1
Penquis Valley School – Technology Dept. Inventory – March 31, 2007	
<i>Item</i>	<i>Quantity</i>
Printer – HP Laser - B/W	16
Printer – HP Laser - Color	2
Printer – Tektronix Wax - Color	1
Printer – HP Ink Jet – color	4
Plotter – HP Ink Jet – Color	1
Plotter – DXY Ink Pen- Color	1
Desktop Computers – Windows OS	44
Desktop Computers – Apple OS	2
Desktop Computers – Linux OS	2
Laptop Computer – Windows OS	36
Laptop Computer – Apple OS	255
Laptop Computer – Linux OS	4
IP Telephones	48
DLP Projectors	12
Elite Projector Screen	12
DVD/VCR Units	14
USB Key Drives	65
Linux Terminal Computers	105
15" LCD Monitors	12
17" LCD Monitors	42
19" LCD Monitors	20
17" CRT Monitors	34

19" CRT Monitors	10
Linux Servers	8
Windows Servers	3
OSX Servers	1
UPS Battery Backups	12
KVM Switches	3
CD Rom Servers	3
Net Storage Servers	4
Apple Airports	18
Wireless Access Points	8
5 port switches	25
8 port switches	9
12 port POE switches	4
16 port switches	2
24 port switches	14
80 port switches	1
Modulators	2
Demodulators	2
Digital Camcorders	5
Digital Still Cameras	6
External CD Rom Drives	3
External LaCie USB Drive	1
External LaCie Firewire Drives	5
Fiber Optic Converters	8
Plasma Displays	2

<i>MSAD #41 Inventory of leased printers from – Océ Imagistics of ME & NH</i>				
School	Location	Volume	New Model	Accessories
Brownville Elementary	Library	32859	IM2080	w/fax
	Principal	30000	CM4530s	w/fax/punch/staple
	Teacher's room	167035	IM4511ss	w/fold/punch/staple/4 drawers
Marion Cook Elementary	Teacher's room	71587	CM4530s	w/fax/punch/staple
	Common Area		IM2080	w/fax
Milo Elementary	AV/Nurse	133948	IM2080	w/fax
	Trailer		IM2080	w/fax

	Teacher's room	36981	CM4530s	w/punch/staple
	Speech	285581	IM4511ss	w/fold/punch/staple
Penquis Valley	Business Comp.Lab	188642	CM4530ss	CM4520 fold/punch/staple
	Guidance	48194	IM3511s	
	Library	204012	IM4511ss	w/fold/punch/staple
	Principal	231819	CM4530s	w/fax/punch/staple
	Teacher's room	440866	2ea.-4511s	w/staple
Special Services	Office	9900	IM3511s	w/fax/staple
Superintendent	Office	54712	CM4530s	w/fax/punch/staple

All teachers in the district have either a laptop or desktop computer. All of the K-6 teachers and Ed Tech IIIs have iBooks. Three Linux labs and a Windows lab are in high demand for grades 9-12. All 7th and 8th grade students and staff have MLTI iBooks. Each of the three elementary schools has an iBook cart with 10 new computers that were added in 2006 in addition to the 5 iBook carts that were already in the schools.

Projectors are used in every building as a teaching tool and for student presentations. There are overhead projectors in the middle school classrooms grade 9-12 teachers share two projectors that are in high demand. The district has one interactive whiteboard at Brownville Elementary that was purchased with eMints funds and is used by the eMints teacher in her classroom. She also demonstrates its use with her students to other teachers within the district and region.

We will add more projectors and screens to each of the buildings to give all students and teachers the opportunity to share presentations and demonstrate evidence of learning using technology. We will be adding multimedia carts to Milo Elementary and Penquis Valley School to give K-6 and 9-12 more opportunities to create multimedia projects that will show evidence of learning and give students the opportunity to create evidence for their electronic portfolio. The updated version of Moodle will allow advanced features for more creative teachers and students. We will continue to study emerging technologies and how we can use them in education to benefit student learning.

- Distance learning for outlying schools
- Linux OS servers for Milo Elementary
- 20 thin clients in the Milo Elementary portable classrooms
- VOIP "voice over IP" for telephone service for buildings within the district
- More projectors

- Multimedia projector system
- Local cable system

5. Collaboration with Adult Literacy Service Providers – Describe how the program will be developed, where applicable, in collaboration with adult literacy service providers.

MSAD #41 is part of Penquis Region Adult and Community Education. The adult education program is fully committed to working with the district to meet the technology goals included in this plan. Adult Education will continue to offer computer classes and open labs in MSAD #41 for community members and staff.

<i>Expected Outcome</i>	<i>Activity</i>	<i>Who is Responsible</i>	<i>Timeline</i>
Improved adult technology literacy	Evening computer classes	Adult Education instructors	2007-2010 ongoing fall and spring
Use of ATM at Penquis Valley	Adult Education courses over ATM	Adult Education Director	2007-2010 ongoing fall and spring

6. Strategies for Improving Academic Achievement and Teacher Effectiveness – Describe how funds, specifically Ed Tech funds where applicable, will be used to improve academic achievement, including the technology literacy of all students attending schools served by the SAU; and describe how funds expended will improve the capacity of all teachers in schools served by the SAU to integrate technology effectively into curricula and instruction.

MSAD #41 developed teacher competencies in 2004. Level I, Level II and Level III (Appendix A). All teachers are working toward Level III, which is full integration of technology in the classroom. The technology committee, with teacher input, will review and revise the competencies during the 2007 – 2008 school year. Teachers are expected to increase skills yearly as they move from basic skills to application skills to integration skills.

During the 2005 – 2006 school year, MSAD #41 developed a set of technology skills for students in Grades K-12 (Excel document Appendix B) and they were adopted in the fall of 2006. All students and teachers will be held accountable to these standards and results of each student's demonstration of skills will be kept in his or her portfolio.

MSAD #41 uses Education Technology Funds to support professional development needs of teachers, educational technicians, administrators and technology personnel. Ed Tech funds are also used to help the district meet hardware and software needs as prioritized in the technology plan. Funds are spent equitably among the three district elementary schools and the one 7-12 school, Penquis Valley. Each school is represented on the technology committee.

<i>Expected Outcome</i>	<i>Activity</i>	<i>Who is Responsible</i>	<i>Timeline</i>
Improved academic achievement	Students will create digital portfolios as evidence of student achievement	Teachers, students, library media specialist, technology director	Students graduating in 2010 will present a digital portfolio

Improved academic achievement and lower retention and drop-out rates	Differentiated Learning using technology and multimedia	Staff and administration	Ongoing
Improved MEA scores, higher SAT scores	Student NWEA assessment results used to improve teacher instruction	Administration, staff, technology director	Improved scores yearly 2007 - 2010
Improve capacity to integrate technology effectively K-8	Train the trainers	MLTI eMints mentor, administration, technology staff, teachers	2007-2008 School year
Improve capacity to Integrate technology effectively K-12	Work with teachers in the classrooms	Technology Director	Ongoing

7. Integration of Technology with Curricula, Instruction, and Assessment – Describe how technology (including software and electronically delivered learning materials) will be integrated into curricula, instruction, and assessment and include a timeline for this integration.

MSAD #41 expects all teachers to integrate technology into their classrooms. The district has purchased a laptop computer for each teacher and Educational Technician III in the district and staff must show gains in use of technology to keep the laptop. This, along with a technology goal in the evaluation process, are strong incentives toward technology integration.

Teachers will be evaluated against their technology goals each school year, and goals for integrating technology will increase each year. We expect full technology integration by the 2008-2009 school year as staff move toward a Level 3 technology competency. Level 3 requires that teachers access quality materials on the internet to use in their classrooms, present materials to students using technology, require students to use technology in the classroom, and evaluate their use of technology on a yearly basis. All teachers will be asked to have one primary goal for improvement in technology each year for at least the next three years.

MSAD #41 is using student email systems and will continue to collect parent email addresses. Information will be sent to both students and parents over email. Teachers in grades 7-12 are successfully using Moodle for online class work. This will be assessed on a yearly basis and new goals will be set each year to increase the use of technology by all who use it.

During the 2006-2007 school year, MSAD #41 began using the Northwest Evaluation Association (NWEA) to provide research-based assessments, professional training, and consulting services to improve teaching and learning.

All graduating seniors in the class of 2010 and every year thereafter will have an electronic portfolio that will replace the current hard copy of the Penquis Exit Portfolio.

<i>Expected Outcome</i>	<i>Activity</i>	<i>Who is Responsible</i>	<i>Timeline</i>
Full technology integration in classrooms	Trainings, goal setting, evaluations	Director of instructional technology, staff and administration	100% of staff will be at level 3 competency by spring of 2009
Increased communication with students and parents/guardians	Use of Moodle and school email	Technology coordinator, library and technology staff and administration	100% of staff will be using Moodle and email in their classes by the spring of 2009
Assessments using technology	NWEA assessment	Technology staff, teaching staff, administration, curriculum director	All students will be taking NWEA assessments and all teachers will be using the results to guide instruction
Electronic student portfolios	Staff and student training	Technology staff, library staff and administration	All graduating seniors by 2010

8. Technology Type and Costs, and Coordination with Funding Resources – Develop a step-by-step action plan, with timeline, that includes goals, activities, required hardware and software, costs, and funding sources. Describe the type and costs of technology to be acquired and how it fits within the current structure (use the list developed in the technology assessment in # 4, above.). Designate sources of funding, specifically Ed Tech funds, E-Rate funds, and funds from other Federal programs, and state and local sources that support technology acquisition and integration. (The example below is available as an Excel document for an optional template).

TECHNOLOGY TYPE, COST, AND FUNDING SOURCE

GOALS	ACTIVITIES	HARDWARE/ SOFTWARE	COSTS	FUNDING SOURCE
Keep up and upgrade infrastructure and software, staff support and training	Maintain 3 technology positions and needed equipment Partner with MLTI and eMints	Switches, servers, monitoring software, IP software	180,000/year	Local Funds, Title IID

Online assessment to improve instruction	Contract yearly with NWEA	Server Space	7,500/year	Local Funds
Programming, Simulations, Robotics and Virtual lessons	Staff Training	Software and online subscriptions	Unknown at this time	Local Funds and Grants
Communication	Email, District Web presence, VOIP	FirstClass Server and yearly contract, IP phones	10,000/year	e-Rate and Local Funds
Increase use of ATM	Staff training	ATM Room and equipment	20,000/year	e-Rate and local funding
Information needed to thrive in a Global Economy	Communication, collaboration and exploration using technology	Internet, computers, Probes and Microscopes, software	Unknown at this time	Grants, e-Rate and Local Funds
Research Skills	Library Media	High speed Internet,	126,000/year	Local Funds, e-Rate
Evaluating reliability of information	Specialist and use of library	Winnebago, Online content subscriptions		
Student self-directed learning	Student Technology Teams	District-wide use of existing technology	\$1000/year teacher stipend	Local Funds
Student Information System	Web2School	Server and maintenance contracts	\$1000/year team travel to workshops \$3,000/year	Local Funds
Multimedia Components	Networking – video cameras, editing capabilities	Video editing equipment – multimedia carts for grades 9-12	\$14,000	Local Funds
Digital Portfolio to replace the paper version of the Penquis Exit Portfolio	Necessary technology in place.	Moodle server, storage server	\$10,000	Local Funds
Increased capacity for	Staff and student training. Add Linux clients to classrooms	Linux Servers and clients	\$3000/year	Local Funds

| grades 3-6 | | | |

9. Supporting Resources – Describe the supporting resources such as services, software, other electronically delivered learning materials, and print resources that will be acquired to ensure successful and effective uses of technology.

MSAD #41 will need to have the following supporting resources to sustain this technology plan:

- Technicians at both the high school and elementary level
- Technology integrator position district wide
- District libraries to maintain current print resources, online resources and computers for research
- Contract with Web2School for student information system
- Online subscriptions to readingA-Z, enchantedlearning, worldbookonline, eMints
- Licenses with FirstClass, Microsoft, and Apple
- Kidspiration, Inspiration, Noteshare, LOGO,
- Investigations math with GeoLogo software
- Science software – Foss kits
- Yearly ATM contract
- Northwest Evaluation Association contract for student assessments
- Internet access for MLTI when iBooks go home
- Best practices supporting collaborative staff integration
- Increased interdisciplinary cooperation using technology
- Across district commonality
- Community wide access to high speed Internet
- Increased use of technology to distribute software

We will also continue to explore new research-based technologies as they emerge.

10. Steps to Increase Accessibility – Describe the steps being taken to ensure that all students and teachers have increased access to technology. The description must include how Ed Tech funds, if applicable, will be used to help students in high-poverty and high-needs schools, or in schools identified for improvement or corrective action under Section 1116 of Title I; and how the steps taken will ensure that teachers are prepared to integrate technology effectively into curricula and instruction.

<i>Outcome</i>	<i>Steps</i>	<i>Funding</i>	<i>Timeline</i>
All teaching staff have computers and feel comfortable using technology. This has been the first step for	All K-8 staff have iBooks and all 7-12 staff have choice of pc laptops or desktops.	Ed Tech funds, local budget	Continuing

ensuring teachers are prepared to begin integrating technology.			
Updated operating systems that will allow students to create multimedia projects.	Update operating systems to run multimedia software.	Local budget	Ongoing
Add multimedia programs to existing hardware	Update software	Local Budget	2007 - 2010
Add hardware to enhance science classes using technology	Add probes and microscopes to science classrooms	Local Funds	2008 Middle School 2009 High School 2010 Elementary
Build capacity to ensure that all 3-6 classrooms have access to computers when they need them	Add Linux servers and terminals capability in grade 3-6 classrooms	Local Budget	2007 – 2010 4 classrooms each year
Build capacity to ensure that 9-12 move toward 1-1 computing	Explore laptop and Linux thin client options	Local Budget	1-1 computing in grades 9-12 by 2010
Build capacity to ensure that all 9-12 classes have access to multimedia capable computers.	Add multimedia carts that have a scanner digital cameras, video cameras, computers with DVD burners keyboard, editing capabilities.	Local Budget	2008 – 2009 2 carts each year and reassess in 2009
Increased staff development opportunities	Technology trainings at each level	Local Funding	Ongoing at least twice monthly

All teachers have a choice of either a laptop or a desktop assigned to them. They communicate daily using their computers and comfort levels have increased. This has made a huge difference in how technology has been integrated into their classrooms. Teachers also have access to the technology integrator or library media specialist at the high school to work with research or other projects.

We added 30 new G4 iBooks to the three elementary schools in 2006. This dramatically increased the ratio of computers per student. The Marion C. Cook School in LaGrange has a

75% free and reduced lunch rate. The additional 10 computers put them at less than 2 students per computer in that school. Brownville has a ratio a little more than 2 students per computer. The ratio at Milo Elementary is closer to 3 students per computer. We plan to add 20 thin clients in the portable classrooms to bring Milo Elementary more in alignment with the other elementary schools. We will also explore the addition of a Linux lab at Milo Elementary for NWEA testing, class research and Internet use to alleviate the high demand for iBooks. Two carts of iBooks are tied up for a week when we do NWEA testing.

Online subscriptions and free access to Internet sites have replaced much of the software we can no longer afford to replace. We will continue to upgrade and replace equipment at all schools. We will also continue to evaluate software and Internet resources.

We have upgraded the airports and put in T1 lines in both Brownville Elementary and Marion C. Cook School since our 2004-2007 technology plan. We will be putting in an additional T1 line at Milo Elementary. We will explore with the communities the possibility of wireless high speed Internet for all our district communities as the technology improves.

MSAD #41 will be sending home the MLTI iBooks in the fall of 2007 and each student will have the opportunity for Internet access at home. We continue to explore options for 1 to 1 computing for grades 9-12. We will have better multimedia capabilities available for 9-12 students by 2008 with the addition of multimedia carts.

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

Describe how various curricula and teaching strategies that integrate technology effectively into the general curriculum and instruction will be identified based on a review of relevant research, and promoted to lead to improvements in student academic achievement.

MSAD #41 will plan selection of technologies and teaching strategies to support teaching and learning in each subject area as curriculum is revised.

MSAD #41 has a Director of Instructional technology. This person helps teachers match technology to curriculum needs and help them develop teaching strategies that make the best use of the technology that is most likely to maximize student learning. The Director of Instructional technology also works with school based teams of teachers to identify and share online resources and software applications. The Director of Instruction oversees the FirstClass email system. This person will oversee the NWEA to make sure it works seamlessly in the classrooms.

The district has adopted both policy-oriented and support-oriented approaches to promote curricula and teaching strategies that integrate technology.

Policy-oriented approach

- Technology criteria in teacher (and principal) evaluation instruments
- Technology criteria in a teacher's individual professional development plan.

Support-oriented approach

The Director of Instructional Technology will facilitate workshops, co-teach, and model use of technology with staff.

Staff will be encouraged to participate in relevant workshops offered outside of the district.

<i>Outcome</i>	<i>Steps</i>	<i>Funding</i>	<i>Timeline</i>
Distance Learning	Add video conferencing abilities to outlying schools	Grant funding	2009
Increased use of Moodle server	Add 2 new classes yearly	Local Budget	By 2010 there will be 6 new classes added to Moodle, including at least one elementary class
Increased use of ATM	ATM training and technical support for teachers	Local funding	Ongoing
Increased use of staff online courses	Publicize online classes on FirstClass folders	Local funding	Ongoing
Increased use of student online courses	Explore online courses available to grades 9-12	Local funding	5 % of graduating seniors will have taken an online class by 2010

12. Professional Development – Describe how ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel will be provided to further the effective use of technology in the classroom and library media center.

MSAD #41 participates in the eMints program and MLTI which both offer trainings our staff attends. Staff members completed a survey at the beginning of the 2006/07 school year and indicated what topics in technology they wanted to learn more about, and we have addressed those needs in several ways.

- Dine and Discuss presentations (AppleWorks, iLife, MS Office, Print Shop, PortaPortal, Rubistar and Edhelper and staff choices.)
- Outside speakers (NWEA presentations)
- Every K-12 teacher has a laptop assigned to them
- Flexible scheduling for “just in time” learning
- Before and after school training opportunities
- Technology Integrator available to work in the classrooms with teachers as requested
- Trainings aligned to support teacher needs and competencies
- Teachers observe our eMints teacher modeling appropriate technology integration in her

classroom

- Teachers are encouraged to attend regional workshops
- Teachers will be trained to help students create digital portfolios

13. Innovative Delivery Strategies – Describe how the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance-learning technologies, will be encouraged, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.

Twelve of the 7-12 teachers are successfully using the Moodle server <http://65.18.28.17/moodle/> to supplement classroom instruction and support teaching and learning. Moodle increases time on task using technology, is interactive, and decreases paper use. All 7-12 staff will be expected to utilize Moodle by 2010.

We hope to expand the use of the ATM system as teachers become more comfortable with technology. We need more foreign language and math courses. ATM in conjunction with Moodle will be a good use of the technology we have available. We will also encourage online learning through the University of Maine and other sources.

<i>Outcome</i>	<i>Steps</i>	<i>Funding</i>	<i>Timeline</i>
Distance Learning	Add video conferencing abilities to outlying schools	Grant funding	2009
Increased use of Moodle server	Add 2 new classes yearly	Local Budget	By 2010 there will be 6 new teachers using Moodle, including at least one K-6 teacher.
Increased use of ATM	ATM training and technical support for teachers	Local funding	Ongoing
Combined use of ATM and Moodle	ATM training, Moodle training	Local funding	By spring of 2008
Increased use of staff online courses	Publicize online classes on FirstClass folders	Local funding	Ongoing
Increased use of student online courses	Explore online courses available to grades 9-12	Local funding	5 % of graduating seniors will have taken an online class by 2010

14. Accountability Measures – Describe the process and accountability measures which will be used to evaluate the extent to which the plan activities are effective in integrating technology into

curriculum and instruction, increasing the ability of teachers to teach, and enabling students to reach Maine's *Learning Results*.

Building principals have evaluated teachers on their effective use of technology since the 2004-2005 school year. Teachers are expected to move along the continuum from learning how to use technology to fully integrating it into their classrooms. The superintendent evaluates administrators on their effective use of technology. Teachers have started evaluating students using the student technology skills list adopted in September 2006.

M.S.A.D. #41 uses the following processes and accountability measures to evaluate the technology plan effectiveness.

1. Yearly inventory of software and hardware
2. Staff assessment on use and integration of technology twice a year
3. Technology Committee reviews and evaluates the plan
4. Technology Committee reviews, evaluates and recommends updated student and staff assessment tools
5. Technology director reports on the state of technology in the district to the School Board
6. Student progress evaluated using online NWEA assessment
7. Student technology skills lists updated yearly and follow students in digital portfolio
8. Students and staff will participate in national NetDay survey
9. MEA scores will measure student progress

Appendix A

MSAD #41

Level One Technology Competencies

Draft January 2004

Basic Operations and Concepts

- ✓ Use input devices (e.g. mouse, keyboard, remote control) and output devices (e.g. monitor, printer) to successfully operate computers, VCR's, audiotapes, and other technologies.
- ✓ Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use.
- ✓ Successfully use word processor to cut, paste, copy, add header and footer, change font, use bold, italics, numbers and bullets. Use spell check, center and space.
- ✓ Save to and open from more than one location on computer or external device.
- ✓ Apply strategies to use network or non-network situation.

Social, Ethical, and Human Issues

- ✓ Demonstrates positive social and ethical behaviors when using technology.
- ✓ Practice responsible use of technology systems and software.
- ✓ Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.
- ✓ Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society.

Technology Communication, Productivity, Research, Problem-Solving and Decision-Making Tools

- ✓ Communicate about technology using developmentally appropriate and accurate terminology.
- ✓ Use developmentally appropriate multimedia resources (e.g. interactive books, educational software, elementary multimedia encyclopedias) to support learning.
- ✓ Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners.
- ✓ Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficiencies, and facilitate learning throughout the curriculum.
- ✓ Use telecommunications and online resources (e.g. e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom.
- ✓ Use technology resources (e.g. calculators, data collection probes, videos, educational software) for problem-solving, self-directed learning, and extended learning activities.
- ✓ Integrates technology into 25% or more of lessons.

***Standards are based on ISTE National Educational Technology Standards with additions from MSAD #41's District Technology Committee.

MSAD #41

Level Two Technology Competencies

Draft January 2004

**It is assumed that for staff to enter Level Two status, they have met all of Level One competencies.

Basic Operations and Concepts

- ✓ Use a variety of media and technology resources for directed and independent learning activities.
- ✓ Use technology resources (e.g. puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving and communication inside and outside the classroom.
- ✓ Use basic operations of spreadsheet and database.
- ✓ Use technology to manage student information and teacher information (e.g. grades, lesson plans and more).
- ✓ Create tables, charts and graphs to communicate information.
- ✓ Troubleshoot external problems such as changing printer ink and paper, clearing printer jams and more.
- ✓ Organizes computer workspace using files and folders.

Social, Ethical, and Human Issues

- ✓ Evaluate technology-based options, including distance and distributed education, for lifelong learning.

Technology Communication, Productivity, Research, Problem-Solving and Decision-Making Tools

- ✓ Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
- ✓ Use content-specific tools, software, and simulations to support learning and research.
- ✓ Apply productivity and multimedia tools and peripherals to support personal productivity, group collaboration and learning throughout the curriculum.
- ✓ Use technology tools and resources for managing and communicating personal / professional information.
- ✓ Requires student technology use as part of curriculum.
- ✓ Uses graphic design elements to match words and ideas.
- ✓ Integrates technology in 50% or more of lessons.

***Standards are based on ISTE National Educational Technology Standards with additions from MSAD #41's District Technology Committee.

Level Three Technology Competencies

Draft January 2004

**It is assumed that for staff to enter Level Three status, they have met all of Level One and Two competencies.

1 TECHNOLOGY OPERATIONS AND CONCEPTS.

Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

- demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education Technology Standards for Students)
- demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

2 PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.

Teachers plan and design effective learning environments and experiences supported by technology.

Teachers:

- design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- apply current research on teaching and learning with technology when planning learning environments and experiences.
- identify and locate technology resources and evaluate them for accuracy and suitability.
- plan for the management of technology resources within the context of learning activities.
- plan strategies to manage student learning in a technology-enhanced environment.

3 TEACHING, LEARNING, AND THE CURRICULUM.

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning. Teachers:

- facilitate technology-enhanced experiences that address content standards and student technology standards.
- use technology to support learner-centered strategies that address the diverse needs of students.
- apply technology to develop students' higher order skills and creativity.
- manage student learning activities in a technology-enhanced environment.

4 ASSESSMENT AND EVALUATION.

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.

Teachers:

- apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

5 PRODUCTIVITY AND PROFESSIONAL PRACTICE.

Teachers use technology to enhance their productivity and professional practice. Teachers:

- use technology resources to engage in ongoing professional development and lifelong learning.
- continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- apply technology to increase productivity.
- use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

6 SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:

- model and teach legal and ethical practice related to technology use.
- apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.

- identify and use technology resources that affirm diversity
- promote safe and healthy use of technology resources.
- facilitate equitable access to technology resources for all students.