

Technology in Use in SAD #4

M.S.A.D. #4 Technology Plan 2006-2009



“We must open the doors of opportunity but we must also equip our people to walk through those doors” - Lyndon B. Johnson

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Introduction

Technology in SAD #4

Technology is an important resource throughout S.A.D. #4, one that all members of the district grow increasingly dependent upon. The aim of this technology plan is two fold: to highlight our recent work in the area of technology and to layout a road map to enable S.A.D. #4 to continue to embed technology into the classroom.

Technology Highlights

- PCHS is one of only a handful of public high schools in the state of Maine to provide laptops for every student.
- PCMS has been actively involved in the MLTI project, as a pilot school and demonstration school.
- All S.A.D. #4 schools have wireless networks available for all students and teachers.
- All S.A.D. #4 staff have their own laptop computers.
- S.A.D. #4 has implemented Power School, a student information system that allows parents to check their student's progress at any time.
- McKusick Elementary and Guilford Primary now have updated mobile computer labs and computers in the classrooms.
- The Adult Ed Program has been successfully using the ATM system for coursework.

Technology use in S.A.D. #4 is on going and ever changing. The opportunities that the 1:1 laptop program provides for students and staff are incredible. As this program continues to grow, we hope to be able to provide more educational opportunities for the S.A.D. #4 community.

1. Community and Parental Involvement

The S.A.D. #4 Technology Committee meets regularly to discuss the status and direction of technology use throughout the district.

The Committee is comprised of the Superintendent of Schools, Guilford Public Librarian, Guilford First Selectman/Technology Consultant, Adult and Community Education Director, District Technology Coordinator, classroom teachers and administrators from each level (elementary school, middle school and high school). The School Board's Curriculum Committee and the Communications Committee have also been engaged in establishing goals, actions strategies, and evaluation guidelines for technology and its integration into the curriculum.

Various committee members also meet with members of the local business community and county economic development council to better understand their needs. The middle school and high school hold forums each year for parents and students to improve communication, to inform parents about technology and its appropriate use in a learning environment, and to gather feedback.

S.A.D. #4 also maintains an extensive website (www.sad4.com) to promote communication throughout the community. Students and staff have email accounts on the district's FirstClass server and the parent portal has been open on Powerschool for three years. Additionally, the phones systems at both PCMS and PCHS have been replaced within the past 18 months. This has allowed us to improve voice communications around the district and to expand voice mail access for staff in these buildings. All these avenues increase staff, student and parent communication throughout the district.

2. Vision

SAD #4 Philosophy of Education

S.A.D. #4 is a community that works together to accomplish a common mission: To promote excellence in teaching and learning in an environment that fosters respect for self and others so that each student gains knowledge, skills, and attitudes needed to participate responsibly in society. Stakeholders of S.A.D. #4, therefore, are committed to providing educational experiences essential for a lifetime of satisfying human relationships, responsible citizenship, and personal growth. In doing so, stakeholders are concerned with the worth and dignity of the individual, as well as with the strengthening of society.

S.A.D. #4 believes that all students can learn and should aspire to high standards. To ensure that all students learn to the best of their abilities and at appropriate developmental levels, the school district strives to recruit, hire, support, and retain staff members who display sensitivity to students' physical, emotional, social, and intellectual needs. While seeking to meet these needs within the context of ever-changing local, national, and world conditions, S.A.D. #4 recognizes its obligation to respond to differing student backgrounds, aptitudes, interests, attitudes, and aspirations. It offers, therefore, varied curricula; provides equitable resources and services; and uses instructional and assessment strategies that address all of the known learning styles and that represent current best practices. The school district welcomes diverse programming and allocates resources for programs and staff development in a manner that fulfills its educational goals. Responsible risk-taking and experimentation are highly encouraged.

In order to create a climate of trust and respect, S.A.D. #4 strives to be a site-based, shared decision-making organization that communicates regularly and often with all stakeholders. Administrators and staff regularly discuss students' educational achievement with the Board of Directors and with the public and periodically prepare and disseminate assessments of district programs and procedures. Frequent communication between the home and the school is emphasized. All stakeholders accept as their continuing responsibility the maintenance of exemplary, safe, and meaningful educational opportunities for today and for the future.

SAD #4 Technology Vision

Our vision for using technology is to provide all learners, pre-school through adult, equal access to technological resources in order to more fully realize the district's vision for education. We believe the opportunity to apply technology enables the learner to communicate more effectively; to find, use, and analyze relevant sources of information; and to understand it's application.

3. Goals

The main goal of technology use in S.A.D. #4 is to achieve the Guiding Principles of the Maine Learning Results. We want to help all students become clear and effective communicators, self-directed and life long learners, problems solvers, collaborative workers, informed and responsible citizens. The very nature of our 1:1 laptop initiative engages students in activities that encourage these behaviors.

Technology Use Goals for Stakeholders in S.A.D. #4

Students should be able to access technology on a regular basis in order to:

1. Use technology as a productivity tool in the development of quality products.
2. Use technology to access information and do timely research.
3. Use technology to communicate intelligently.
4. Use appropriate technology to solve problems and be able to determine which technological tool should be used.
5. Use technology creatively to enhance their work.
6. Use technology to develop relevant skills and to reinforce skills and concepts from other curricular areas.

Staff members should be able to access technology on a regular basis in order to:

- 1-6. See student goals.
7. Use technology to reduce time spent on record keeping and streamline record keeping.
8. Use technology to improve student tracking and assessment.
9. Use technology to remain current on curriculum and educational issues.

Administrators should be able to access technology on a regular basis in order to:

- 1-6. See student goals.
7. Use technology to reduce time spent on record keeping and streamline record keeping.
8. Use technology to improve student and staff tracking and assessment.
9. Use technology to prepare the budget and manage finances.
10. Use technology to remain current on curriculum and educational issues.

Adult Ed. should be able to access technology on a regular basis in order to:

- 1-6. See student goals.
7. Use technology to access distance learning courses/opportunities.
8. Use technology for conferencing with remote sites.

The School Board and community should be able to access technology on a regular basis in order to:

- 1-6. See student goals.

Technology Plan Goals

Goal #1 Develop and implement a sequential (K-12) competencies-based technology curriculum for all students.

A K-8 computer curriculum has been in place for the past 5 years. This curriculum was based on the National Educational Technology Standards. This curriculum was designed so that students would be able to meet the computer literacy graduation requirements by 8th grade and would not have to take a basic computer class in high school. In the time that has elapsed since the development of this original curriculum, many things have changed in the district. Because of the 1:1 laptop implementation in grades 6-12, our computer curriculum requirements have changed. Based on feedback from students and staff, the grade 4-12 students need to have improved keyboarding skills; a crash course in basic productivity skills and the students want advanced training utilizing high-end software packages. Students, teachers and administrators all need education in the areas of online safety and digital literacy for the 21st century. Teachers and students also realize the need for training in effectively using the software and hardware to communicate better. And because computer use is now becoming embedded in classroom instruction, teaching and learning in the classroom is changing. This is putting additional pressure on the current technology curriculum and we need to ramp up the skill levels of both students and teachers. This is an ongoing topic for current and future staff development.

Goal #2 Develop and implement a systematic plan for providing resources to integrate technology.

Integration of technology requires that we pay very close attention to several different resource areas. One resource that needs to be in place to effectively integrate technology in the classroom is the physical technology. We have worked very hard over the last four years to achieve a 1:1 student/laptop ratio at grades 6-12. We have a 3:1 ratio at grades 4 and 5 and really need to move them to 1:1 as well. At the same time, all teachers, K-12 have been given laptops and the K-3 elementary buildings all have mobile computer labs as well as classroom clusters. The district needs to identify budget resources that can be depended on to keep this access level up to date and to move the 1:1 program down to the lower grades. We have made major gains in this area in the past year. The current plan calls for staff laptops to be replaced on a 3 year rotation. Last year, the high school staff received new laptops, this year the middle school staff will either receive a new MLTI ibook or a new MacBook if they don't meet the

qualifications for MLTI. Next year the elementary teachers are on track to receive new machines. The funding for the past two years has primarily come out of the regular district budget. The high school 1:1 laptop program is also now on a renewal plan for the second year. Our plan is to buy a grade level quantity of laptops for the incoming freshmen class. They will keep them for their entire 9-12 career and then we either use them for parts machines to support the rest of the 9-12 program or we move them down to the elementary level. Both last year and this year the laptops were purchased with 80% district funding and 20% Title V and Title VI funding. Considering that for the first 3 years of the PCHS 1:1 laptop program all the equipment was purchased outside of the regular budget, this is a major commitment on the district's part. At the middle school level, the 7th & 8th grades will be receiving new MLTI iBooks this year. The 4-6 program will also be getting upgraded from iBooks purchased in 2000 to the older MLTI machines. The district used Title IID, Title VI, and laptop insurance money to buy out our MLTI laptops and 200 more from other schools. This pool of laptops allows us to expand our 1:1 program down through 5th grade, upgrade the machines available, and gives us a pool of machines to cannibalize for parts to keep the various programs running.

Another resource area that must be in place for integration is network connectivity. Over the past few years we have been building and rebuilding our networks, we now have wireless networks in all the buildings in the district as well as roaming access to the wireless networks in the public libraries in our district. As students and staff members become more dependent on using technology, these systems must also become more robust. This is an ongoing process that cannot be ignored. We have been actively updating servers and connections and trying to provide the best level of service and speed that we can. We currently plan on purchasing at least one new server each year to replace old servers and we plan to upgrade one building network each year to improve service. We try to take advantage of Erate funds to stretch our other funding sources whenever possible for this work.

Software and peripherals are also an important resource. While we purchase laptops with a basic set of software tools, we are finding that specific courses need specific software and peripheral solutions to really move learning to another level. Electronic sensors and probes in science class, graphing programs in math, digital cameras, scanners, and drawing tablets in art class are examples of specific pieces that need to be added to the basic package.

The last resource area that must be in place for true integration is staff development and support. Without timely support, teachers will become frustrated and the investment in

equipment, networking and connections will all be wasted. During the last two years, we have expanded the availability of people to help keep the equipment running and to help update teacher skills and to work with teachers and students in the classroom. This support will continue to play an important role in continued integration and Learning Results alignment.

It is critical that funding for these resources continues to become embedded in the regular district budget to provide for ongoing, dependable upgrades and expansion. The technological tools that we have provided to teachers and students have greatly impacted student learning and enabled us to better track their progress on the Learning Results across grade level and subject matter.

Goal #3 Successfully embed technology use in the regular classroom curriculum in exciting and engaging ways.

The whole reason for S.A.D. #4's commitment to technology in the classroom is because we believe that it has a positive impact on learning. In order for technology use to become truly embedded in the regular classroom curriculum, teachers must consciously align their classroom practice with the Maine Learning results and with the resources and capabilities provided to them by the technology. This is an ongoing process. Teachers and students need to have immediate, fingertip access to the technology. Our recent steps in that direction have provided for 1:1 access in many grades. Now we must focus on purchasing necessary peripherals and dedicated software for classroom instruction. The 1:1 laptop initiative must also be expanded to other grades at the middle school. We must also provide staff support and the time that this kind of systemic change requires in order to be successful.

Goal #4 Successfully operate the technology infrastructure required by a modern school district.

In this day and age, schools cannot operate efficiently without a technology infrastructure. At the turn of the last century, schools were moving to indoor plumbing, central heat and by the middle of the century, electricity! Those infrastructures and more are now expected as the bare minimum. In this century, technology is the new basic necessity. Over the past 15 years, computers have moved from one machine, operating individually, to a world-wide network. Computers, video, audio, phone systems, security systems, intercoms, distance learning systems, accounting systems, etc. are all intertwined and sometimes actually work together reasonably well. Staff, parents and students in this district all expect technology to work and be available at any time. Just like they expect the lights to come on in a room when

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they flip the switch, they also expect their email, grade program, internet and all other services to work at the click of a button. This means that we must pay very close attention to the systems behind the technology – networks, servers, access speeds, wireless access points, routers, switches, system software, etc. This requires equipment, a replacement schedule for the equipment and support – almost 24/7. The district currently plans on upgrading a minimum of one server each year, staying current on server support software and subscriptions, upgrading at least one building network per year and providing training for support staff whenever possible. This year, the Filemaker Pro server which houses our inventory system, district policy book, district curriculum and soon, our district library card catalog will be upgraded to a new version of Filemaker and the machine will be replaced with a newer server. The district library system has been on Minerva and that has not worked well for us. We are moving to a Filemaker based system which is not only much cheaper but is something that we have the expertise to support and develop locally. We will also be installing a Cymphonix box to improve filtering, provide packet shaping and traffic shaping in the middle school and high school. The aim is to cut down on non-educational use while providing a faster, more stable network for educational use. The elementary schools will be getting upgrades to their wireless network. They are currently running original Airport base stations running at 10-baseT speeds, the new base stations will operate at 100-baseT speeds and will provide more coverage in the buildings. Also, the middle school wireless network will be updated, courtesy of MLTI.

The phone systems are another integral part of our system. In 2005, a new Avaya Partner phone system was installed at the high school. During the spring of 2006 a new Avaya Partner system was installed at the middle school. Also at this time, the Centrex and long distance contracts were re-written to maximize our phone service capabilities throughout the district. As a result we were able to cut the number of our phone lines in half, which also reduced the district phone bill by almost half. At the same time we improved phone services throughout the district. We know that the phone systems at both elementary schools are obsolete and parts are no longer available. We already have a plan in place and quotes to install new Avaya Partner systems into each of these buildings during the next couple of years. This system has proven to be a cost effective system that meets the needs of our district for the foreseeable future.

A key part of all of this technology is the support staff. We have built our staffing up over the past few years to the point where we now have a full time district tech. coordinator, a full time technician, a teacher who is a certified Apple repair person, a technology integrator, and

several teachers who are very experienced at supporting and integrating technology. The certified repair person runs our Apple self servicing program so we can do all warranty work on site. This has been a huge benefit to our district. It has also been a great learning experience for students in the laptop repair program. This summer we are using Title V money to send our computer technician to Apple's service training program so he can also become certified to do warranty work. Ideally, we need another technician in the district and we need integrators at the k-8 level. While these positions are currently in discussion, they are not part of the budget either this year or next.

Overall, these four goals are designed to support the educational mission and operation of the district. These goals provide us with direction and a framework to focus our technology programs, but they also allow us flexibility so we can take full advantage of opportunities and new technologies as they become available.

4. Identify Necessary Technology

Assessment of Current Technology

District

Firstclass Email Server with licenses for all students and staff
Powerschool Student Information Server
1 file server
Web Server
Filemaker Pro Server
Realworld Financial system
12 cell phones with monthly service.

PCHS

295 student ibooks – purchased in 2002 - 2005
27 teacher ibooks – purchased in 2004-2005
40 desktop stations – current in the last 5 years
Wired network with drops in every room, wireless network throughout the building
ATM room with ATM connection to the Internet for both data and interactive video supported by MSLN
4 networked photocopiers/digital printers
12 LCD projectors, 4 video cameras, 10 digital cameras, 6 scanners
42 phones, one on each teacher's desk, voicemail, central system, centrex - 2005

PCMS

153 MLTI ibooks
50 ibooks – purchased in 2000
20 teacher Powerbooks – purchased in 2000
20 imacs – purchased in 1998
Wired network with drops in every room, wireless network throughout the building
Internet connection shared with the PCHS ATM Connection
4 networked photocopiers/digital printers
7 LCD Projectors, 6 video camera, 12 digital cameras, 5 scanner
47 phones, one on each teacher's desk, voicemail, central system, centrex - 2006

ELE

24 teacher ibooks – purchased in 2002-2004
70 imacs – purchased from 1998-2001
50 ibooks on carts – purchased in 2000
Wired network with drops in every room, wireless network throughout the building
Internet connections provided by MSLN at T-1 speeds
4 networked photocopiers/digital printers
2 LCD Projectors, 2 Digital Video cameras, 4 digital cameras, 2 scanners
30 phones, very old system, no voice mail, on it's last legs – Centrex also

List of Necessary Equipment and Telecomm Services

1 laptop for every student in grades 4 –12 with 3% spare pool – 680 machines
1 laptop for every k-12 teacher/support staff/administrator – 140 machines
1 desktop or laptop on mobile cart for every 5 k-3 students – 70 machines
20 networked printers
50 LCD projectors, speakers, multimedia carts
50 digital video cameras
20 scanners
50 digital still cameras
Science probes/USB microscopes – as necessary in science class.
10 servers, for various services such as student information systems, assessment and curriculum databases, email, webserver, file sharing, etc.
Student machines on a 4 year rotation, Staff machines on a 3 year rotation.
Email and groupware software/system for all – currently using Firstclass
Online resources, United Streaming, Marvel, Marco Polo, etc.
Fast, reliable Internet access in all buildings and rooms, currently provided by MSLN
ATM system for real time 2 way video conferencing and distance learning
Additional networking – updated servers, updated switches
Firewall and security software for network/system security
Necessary productivity and educational software
Online subscriptions for content such as United Streaming videos, Marvel, etc.
Automated library system throughout the district.
UPS and back up equipment
Updated phone systems with Centrex and voice mail capabilities in all schools.

5. Collaboration with Adult Literacy Service Providers

S.A.D. #4 has had an outstanding Adult Education program for many years. The Adult ed program has recently become a partnership program with 2 other area districts. This program works in conjunction with the K-12 program to help provide alternative programs for high school students and staff development courses for district employees. The Adult Education program has also worked very successfully with the adults in the community. Part of this program includes computer resources and computer courses for the adults. This past year, the Adult Ed. program utilized the ATM system to run two different courses for adults. This was a very successful endeavor and there is already an Adult Ed. ATM lass scheduled for the fall semester. This collaboration will continue in the future and expand as resources become available. Also, the district as a whole works with outside services on an as needed basis.

6. Strategies for Improving Academic Achievement and Teacher Effectiveness

The best way to improve academic achievement is to engage students in their own learning. The use of laptops in a 1:1 environment is a natural hook for today's students. They have grown up getting information and learning through the use of audio and video. By using computers effectively, we are providing a learning environment that is uniquely tailored to the student's learning styles. S.A.D. #4 is committed to providing teachers with experiences and support to effectively integrate technology into their curriculum. Our efforts at improving effectiveness and achievement include:

- Using Ed Tech funds to provide up to 70 days of technology integration and curriculum support from a consultant during the past 3 years, this funding will continue out of Title II for the 06-07 year and hopefully beyond that.

- Hired a part time technology integration specialist at the high school 4 years ago out of the regular budget, this has become a regular position in the local budget.

- Hired a full time technician for K-8 2 years ago, this is paid for out of the regular budget and is a regular position.

- During the 05-06 year, Dr. Mike Muir from University of Maine at Farmington worked with the PCHS staff during full day and half day workshops on technology integration and engaged learning. This was paid for out of Title IID funds, hopefully this university connection will be ongoing.

- Continuing to offer after school training opportunities for all staff, a minimum of 30 sessions will be offered each year. The content of the sessions are based on the technology needs assessment and teacher requests. These sessions have been paid for out of PPPD money in the past, due to the cut in PPPD it is expected that these sessions will now be paid for out of Title IID.

- Utilizing Powerschool data to identify trends and provide information on student needs. The annual update fees for Powerschool are funded out of Title V.

- The district technology coordinator will continue to provide just in time support and integration help for all teachers in the district.

- Encouraging all staff members to attend technology training and provide feedback on their needs for integration.

- Teacher workshops will continue to focus on curriculum development with an eye to integrating technology into project based activities wherever possible.

- Annual surveys to all stakeholders will be implemented. The results will be used to help focus the use of our limited resources.

- Utilizing online testing tools, like Star Reading Tests, Lexia, etc. to identify student strengths and weaknesses.

- An online database for the S.A.D. #4 curriculum is under development, teachers are currently inputting their units. As this is more fully developed, their classroom units and activities will be cross-referenced to Maine Learning Results.

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

One of the underlying principles of a 1:1 initiative, such as the one we are operating in S.A.D. #4 is the expectation that the technology will be integrated seamlessly into the classroom. This is also one of the most time intensive parts of our technology program. Teachers need continued staff development in integration, inquiry based learning strategies, engaged learning, assessment and curriculum alignment.

Over the past few years, the district has purchased a number of software packages and peripherals to use with the computers. Several of these packages are utilized throughout the system to increase productivity: Microsoft Office, Appleworks, Firstclass Email, Inspiration, NoteTaker, etc. Also, we have purchased peripherals that are focused on in class use of technology. All the classrooms at the middle school have large screen televisions wired to provide instant presentations from student and teacher laptops. Televisions on carts are available at all the other schools in the district as well. LCD projectors are available at all schools for presentations and there is an identified need to increase the number of projectors available in the classrooms. Other peripherals that were purchased with curriculum integration in mind are the Pasco science probes and the Intel USB microscopes. These devices are being used in science classes in grades 4-12. As teachers have become more knowledgeable about the use of these probes, we have needed to purchase more of them. These needs for more peripherals are continuing to be identified as teachers find more ways to utilize the technology. Also, based on feedback from teachers and students, we need to investigate the availability of subject specific software at all grade levels. We also need to invest in software upgrades and annual online subscriptions on a regular basis.

The district has been investing in assessment tools, and will continue to use these tools to help identify individual student strengths and weaknesses as well as to see overall patterns of effectiveness in instruction. Tools that are currently being used include Renaissance Learning's Star Reading and Star Math Tests and Quick Reading Test from Lexia Learning for reading. We have also developed a collection of online math tests that are used to identify student weaknesses and strengths as well. We need to continue to investigate and identify tools that will work well for us in all areas over the next few years.

While it is very easy for us to identify uses for technology at the middle school and high school level, one of the areas that we need to focus our resources is at the k-3 level. During the 06-07 school year, elementary teachers will be asked to identify how they can utilize technology

in their classroom and the district technology coordinator will work with them to find the resources necessary for successful integration.

The timeline for integration into curricula, instruction and assessment is basically ongoing, constant and continuous. As a district we must take all teachers from where they currently are and move them forward. Not only does this take time, but also because of the ever-changing nature of technology, this process will be continuous. Currently, a curriculum consultant and the curriculum coordinator are working with teachers K-12 on aligning curriculum to the Maine Learning Results identifying gaps, overlaps, and areas of concern in the existing curriculum. This is another ongoing project. Teachers at each level have offered staff development courses over the past few years; this will also continue. Another project that has been slowly developing is the Firstclass communication system. This email system has been used for years by staff members to enable easy communication throughout the district. Over the past three years students in grades 7-12 have been added to the Firstclass system. Future expansion may include the lower grade levels and the community at large. Powerschool provides our backbone student information and grading system. All teachers are using PowerGrade as their electronic gradebook. Both students and parents have access to the parent portal on Powerschool and can access current information about grades, lunch transactions, currently 80% of gr. 7-12 students or parents access this system weekly. The ATM system at the high has started to be utilized over the last couple of years. Last year students received 4 different courses during the day over ATM. The Adult Ed Department offered one course and received another course in the evenings. The ATM system was also used by a variety of groups for meetings. This coming year the high school is scheduled to originate 2 courses and the Adult Ed. Department has already scheduled in one class that will originate from PCHS in the fall. We hope to expand offerings over the ATM system as our staff becomes more adept at teaching over the system.

8. *Technology Type and Costs, and Coordination with Funding Resources*

Goal #1 Develop and implement a sequential (K-12) competencies-based technology curriculum for all students.

Goal #2 Develop and implement a systematic plan for providing resources to integrate technology.

Goal #3 Successfully embed technology use in the regular classroom curriculum in exciting and engaging ways.

Goal #4 Successfully operate the technology infrastructure required by a modern school district.

Goals	Activities	Hardware/Software	Costs	Source
1,2,3	Committee to review current literature and other info. about best practices.	books/periodicals/online resources	\$300	District Funds
1	Tech coord and committee work to develop curriculum framework for tech. curriculum.	none	Part of tech coord. Salary – (57,750 for 06-07)	District Funds
1	Explain curriculum to K-12 staff, identify who is responsible for doing what, train teachers in how to implement the new curriculum.	none	\$2500	District Funds
1,2,3,4	Explore advanced technology training options for staff and students.	none	Nothing to investigate – major funds to implement.	
1,2,3,4	Coordinate technology integration with curriculum work. Expand upon curr.database	Filemaker server, server software, Filemaker licenses for teachers and administrators.	\$5000	Title IID, V, VI
1,2,3	Technology and Curriculum Integration Consultant	65 days at \$400/day	\$26,000.00/yr	Title IIA
1,2,3	Technology integration sessions	30 @ 100 each plus supplies	\$3500/yr	Title IID, V, VI
1,2,3,4	Powerschool annual support agreement	Powerschool server software and support	\$4000/yr	Title IID, V, VI
2,3,4	District technician		\$26,208 + bennies	District Funds
2,3,4	Database customization	Powerschool and Filemaker	Part of Tech. Coord. Salary	District Funds

Goals	Activities	Hardware/Software	Costs	Source
4	MEDMS training support and integration	Tech time/secretary time	Part of salaries	District Funds
1,2,3,4	Teacher training, class integration – Integration Specialist at HS	Approximately 1/3 of time.	\$10,000 + bennies	District Funds
2,3,4	Implement 1:1 down to 5 th grade	130 older MLTI machines plus assoc. software and ram upgrades	\$13000	Title IID, V, VI
2,4	Install Cymphonix traffic shaper for PCMS and PCHS	Cymphonix box, installation and setup	\$7500	Title IID, V, VI
2,3,4	Purchase new laptops for incoming freshman class	70 ibooks, cases, associated software and warranties	\$77,000	District Funds
2,3,4	Purchase new laptops for non- MLTI middle school staff	19 macbooks, cases, associated software and warranties	\$22,800	District funds
2,3,4	Receive new laptops for all 7 th & 8 th grade students and staff	135 ibooks and associated software, cases, support, etc.	Value over 4 years: \$160,000	MLTI
2,4	Purchase new workstations for PCMS secretaries	2 mac mini's, monitors, associated software and warranties	\$2,500	District Funds
2,4	Purchase new library software and a machine for PCMS library, implement new card catalog software.	Mac mini, Atheneum software	\$2,000	District funds
4	Upgrade Elementary wireless network	Using Snow base stations taken out of the HS.	Tech. coord. Time – part of salary	District Funds
4	Upgrade PCMS wireless network	MLTI provided wireless hardware	None to the district	MLTI
2,3,4	ATM system to provide high speed internet access to PCMS and PCHS as well as ATM classes	ATM system	26,000/yr	80% erate, 20% district
2,3,4	T-1 lines at McKusick Ele and Guilford Primary	T-1 lines, services and routers as provided by MSLN	Ballpark - \$24,000 – paid by MSLN	MSLN
4	Centrex Phone Service and long distance phone service	40 lines throughout the district	\$16,000	80% erate, 20% district
4	Cell phone service	12 phones throughout the district	\$5,000	80% erate, 20%

				district
Goals	Activities	Hardware/Software	Costs	Source
2,3,4	Moodle server for collaboration	Utilizing old Filemaker server, free Moodle Software	Tech. coord. Time – part of salary	District Funds
2,3,4	Firstclass annual fees	Firstclass server updates and support	\$3,700/yr	80% erate, 20% district
2,3,4	United Streaming Video Service	Software subscription	\$4,500/yr	Title IID, V, VI
2,3,4	LCD projectors and multimedia carts – 4, 2 for ele. schools, 2 for HS	LCD projector, speakers, cables, cart	\$4,000	District funds
2,3,4	Various software licenses	Lexia, Office, MyGIS, typing programs, art programs, cad, etc. Based entirely on teacher/curriculum needs	\$12,000	Title IID, V, VI
1,2,3,4	Conference and workshop fees for staff		\$7,000	Title IID, V, VI
1,2,3,4	Misc. peripherals	Cameras, pasco probes, batteries, scanners, etc. Based entirely on teacher/curriculum needs.	\$8,400	District funds

- Note: The above budget is based on the 06-07 school year budget. While it is anticipated that similar resources will be available in future years, it is very hard to develop a long term budget due to changes in EPS and Ed-Tech funds. Also, due to the fluid nature of technology, while the activities for future years will follow a similar pattern to the ones delineated above, it is impossible to detail exact expenditures 2 or 3 years from now.
- EPS targeted funds for Technology – according to EPS, SAD #4 should be spending \$45,305.00 at the elementary level and \$69,531.00 for targeted technology funds in 06-07 for a total of \$114,836.00. Based on our current understanding of how EPS targeted funds should be used for educational technology, this year’s budget is supporting \$196,308.00 from various funding sources. The items highlighted in yellow in the above table are included in this EPS targeted funds figure.

9. Supporting Resources

System wide supporting services include network engineering; software support – especially for critical network systems such as Powerschool, Firstclass and Realworld; maintenance of systems, installation and upgrading. Supporting services also include just in time tech. support for staff and students and continuous staff development.

Other supporting resources include continued access to the Internet and online databases. The state of Maine currently pays for several online databases for all citizens of the state (MARVEL), including the EBSCO research databases. United Streaming Video, an online service has been successfully introduced into the high school and middle school this past year. Continued access to this resource will be necessary, as will expanding this access down to the elementary schools in the future. We are constantly exploring and evaluating a variety of software packages for classroom use. The technology specialists work closely with classroom teachers to identify useful software and websites for the classroom.

10. Steps to Increase Accessibility

All of the schools in SAD #4 are high-poverty and high-needs schools. Over the past few years we have worked to increase accessibility for students, teachers and the community. We will be continuing to do so in the future. Starting with the 06-07 school year, every student in grades 5-12 has 1:1 access utilizing iBooks and wireless networks. All students in grades 7-12 are able to take their computers home. Ed Tech funds play an integral part in funding our technology system. We utilize Title IIA, Title IID, Title V and Title VI funds in support of our technology programs throughout the district. We have made use of Ed-tech funds to improve the networking connections in the schools, provide laptops for teachers and students, purchase software and peripherals, pay for annual software subscriptions, training and conferences, and employ integration consultants to work with teachers to promote integration in the classroom. These activities will continue in the future as funds become available.

11. Promotion of various curricula and teaching strategies that integrate Technology

Of course, all the access in the world will not improve learning if teachers are not prepared to utilize the technology in the classroom. This past year, the high school staff dedicated their in-service days and release time to a technology integration workshop series led by Dr. Mike Muir from UMF. This has already started to make an impact in some classrooms. We will be offering at least 30 different after school staff development sessions on technology integration. We will be using some Ed-Tech money to hire an integration and curriculum specialist for 60 days for the 06-07 school year. The high school and the middle school both have people on site to provide just in time support during the day as well.

Curriculum work is ongoing at all levels in the district. Teachers and administrators have gone to workshops presented by nationally known experts in teaching, learning, and current best practices. Several staff members are actively involved in the MLTI project and actively offer workshops on technology in the classroom. The district also uses documents such as Promising Futures and ISTE's NETS series to guide our work. Staff members are aware of resources, both online and in print and utilize them in their curriculum integration work. We use the Firstclass email system to raise awareness of various resources and the consultants that work for the district are also well versed in national trends and standards.

12. Professional Development

The district provides five workshop days per year for all staff members to engage in formal professional development. This past year 3 days were dedicated to technology integration training at the high school level, future workshop days will also be utilized for technology staff development. The district also encourages all staff to continue their education at the graduate level at local universities as well as online. After school courses are ongoing and are designed to be responsive to the needs of the staff. The district also utilizes consultants and technology integration specialists to provide just in time staff development in the classroom. The district has been very supportive of the MLTI initiative and sends people on a regular basis to participate in MLTI training opportunities as well.

13. Innovative Delivery Strategies

S.A.D. #4 is a very rural, remote district. Other than the programs provided by the district, we do not have much in the way of local educational opportunities. Specialized programs or enrichment activities are few and far between. We currently utilize the ATM system to offer students advanced or specialized courses. We have also started enrolling students in online or virtual internet courses this past year. We are constantly exploring available options for high quality online coursework. The area school districts will have a common calendar for the 06-07 school year to enable all the districts to offer and receive courses over the ATM system. The middle school has taken advantage of online, virtual tours for several years to expose students to places that we physically cannot travel to. Both the high school and the middle school utilize online resources such as United Streaming Video with great results. The adult ed. program has successfully helped community members earn degrees online for several years utilizing both the ATM system and the Internet. We are constantly exploring distance learning as a viable opportunity for our community. We hope to expand these opportunities for both staff and students as we gain more experience with the technology and the media.

14. Accountability Measures

Accountability in our district is hierarchal. The district technology coordinator reports to the school board annually on the state of the technology systems in the district. The technology coordinator also reports to, and works closely with, the superintendent on a regular basis. The district technology coordinator in conjunction with the building principals evaluates the effectiveness of technology in the classroom. Building principals are now including technology use as part of their staff evaluations to help ensure that teachers are using the technology effectively in the classroom. The technology coordinator looks at usage reports, network access, program logs, repair logs, etc. to determine whether resources are being used efficiently. Teachers report their usage, needs, etc. to their principals and the technology coordinator to help determine the future course of purchases and staff development. An online survey system will be implemented during the 06-07 year to formalize this process. This survey system will ask teachers to document their use of technology, explain how they have integrated it into their curriculum units and show alignment with the Maine Learning Results. Students and parents will also be part of the online survey system to help inform future directions and improvements. As these systems get up and running, we will be able to move away from the anecdotal evidence that we now rely on to make decisions and move to data based decision making.