

TECHNOLOGY PLAN

Lewiston School Department
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CONTENTS

Contentsii

Introductioniv

Technology Plan5

I. Community and Parental Involvement5

Promoting Involvement of the Community and Parents in
Education and the Schools.....5

Informing Parents and the Community about Technology and
its Proper Use6

II. Technology Vision for Lewiston.....7

III. Technology Goals.....9

Student Learning Goals9

Curriculum Development and Integration Goals9

Professional Development Goals10

Policy Goals.....10

Access and Equity Goals11

Goals to Promote Effective Work Practices11

Infrastructure and Service Goals11

IV. Technology Needs & Assessment [Identifying Necessary Technology]12

Technology Assessment12

Technology Currently in Use12

Technology Needed to Reach Goals13

V. Collaboration with Adult Literacy Service Providers15

VI. Strategies for Improving Academic Achievement & Teacher Effectiveness.....16

VII. Integration of Technology with Curricula, Instruction, and Assessment18

Integration Timeline19

VIII. Technology Type and Costs, and Coordination with Funding Resources20

Action Plan20

IX. Supporting Resources	21
X. Increasing Accessibility.....	22
XI. Promotion of Various Curricula and Teaching Strategies that Integrate Technology	24
XII. Professional Development.....	25
XIII. Innovative Delivery Strategies	26
XIV. Accountability Measures	27
References	28

INTRODUCTION

Here in Lewiston, we are working to build a community of lifelong learners with the skills needed to succeed in life. Technology plays key roles in this work—it makes learning accessible; it facilitates communication; it enables us to track, report, and evaluate our progress; and it improves learning. We are committed to using the results of sound research to shape our decisions about the professional development we provide our staff, *the integration of technology*, and the technology infrastructure we build and support to achieve our goals. The following technology plan maps our course for the next three years.

[The names of the sections of this plan, and the order in which they appear, are dictated by state requirements. Meeting these requirements is essential for state approval of the plan and for eligibility for state and federal technology funding as well.]

TECHNOLOGY PLAN

I. COMMUNITY AND PARENTAL INVOLVEMENT

The overall goal is to provide the community with an easy, effective communication link to our schools.

Every year, the school department holds one or more public meetings to serve the following purposes:

- to inform the public of the latest technology developments throughout the school department
- to inform the public about the strategies employed throughout the district to use technology as an effective tool for learning,
- to review technology policies, including the Internet safety policy, and
- to solicit feedback from the community about desired future directions for educational technology in the district.

Each year, the community (through the City Council) supports a school budget that allocates money to support technology purchases, repairs, upgrades, and training.

Administrator and teacher input and feedback about the district's plans for and uses of technology is sought through various means: discussions during staff meetings; discussions during building technology meetings; through technology surveys; and before, during, and after technology professional development. Technology self-assessment surveys are administered to teachers every two years.

PROMOTING INVOLVEMENT OF THE COMMUNITY AND PARENTS IN EDUCATION AND THE SCHOOLS

The technology infrastructure of the Lewiston School Department is used to facilitate communication between educators and the community. The extensive school department web site (www.LewistonPublicSchools.org) posts news about curriculum projects, strategic planning, school board minutes, and budget development. Community members find on the web site multiple ways to access information about learning in the schools and to contact key people within the system. Parents use the web site to stay informed about school events, sporting events, school menus, *and* homework assignments. Also available are the high school's program of studies, adult education's course brochures, and the district's complete policy manual.

Several schools and classrooms within the school department have their own web sites that are used as a vehicle for communication with parents.

The Maine Learning Technology Initiative (through which the state supplies every 7th and 8th grade student, teacher and grade 9-12 teachers with a wireless laptop computer), continues to give us new ways to involve parents and the community in our middle school. The excitement around the equipment provided by this initiative gives us an engaging way to involve parents as key players in helping their children learn and be safe with computers.

The district uses PowerSchool for its student management software. Parents can check on the student progress of their students by using the PowerSchool Parent Portal for grades 3-12.

INFORMING PARENTS AND THE COMMUNITY ABOUT TECHNOLOGY AND ITS PROPER USE

At least once a year, at one of our public meetings about technology, we give community members information about how technology is used in the schools. We also provide community members with information about how to supervise computer use in the home, and how to maximize the safety of children who use the Internet. Our web site posts this information prominently at the top of our Homework Help page as well. Lewiston Adult Education and some of the Parent Teacher Organizations also offer periodic “Safety on the Internet” workshops.

II. TECHNOLOGY VISION FOR LEWISTON

The Lewiston School Committee adopted a Strategic Plan in September 2000 that interweaves the importance of technology throughout.

Our Vision:

Lewiston Public Schools compose a school system of excellence, where all learners succeed at high levels and where learning is standards-based, collaborative, rigorous, interactive, and responsive to the needs of diverse learners and our community.

Our Mission:

To develop lifelong learners who value themselves and others, contribute to their community, and succeed in a changing world. Each Lewiston student leaves school as: 1) a clear and effective communicator, 2) a self-directed and lifelong learner, 3) a creative and practical problem-solver, 4) a responsible and involved citizen, 5) a collaborative and quality worker, and 6) an integrative and informed thinker.

Our Beliefs about Learning and Community:

We believe:

- All students can learn and want to learn and succeed.
- students learn in different ways and at different rates.
- all students can be held to high standards with flexibility in the time to achieve them.
- success breeds success.
- our schools should be safe and welcoming environments that support learning.
- students, parents, and teachers are partners in the learning process.
- students need personal connections/relationships with teachers and mentors.
- the learning process should reflect the most current research on cognition and student development.
- values and common goals shape and change the working environment of an organization.
- education must challenge students and foster responsibility.
- instruction and assessment must be aligned, learner-centered, and based on standards.
- Maine's Learning Results and Maine's Common Core of Learning should guide the development of curriculum and direction of instruction.
- sustained professional development is essential for an organization to achieve its goals.
- technology is a tool that, when integrated, enhances learning, communication, and work.
- community partnerships in education promote ownership and sense of community.

Our Goals 2005-2010:

Learning Results: To develop and implement a well-articulated, challenging, standards-based curriculum, upon which to base student assessment and promotion.

Professional Development: To engage staff in a focused program of professional development that supports student learning and addresses district, school, and individual professional needs.

Technology: To build and activate a technology structure that supports the integration of technology for learning, work, and communication with students, parents and the wider community.

Community: To forge community partnerships that support learning and to make school facilities year-round center for community learning.

Facilities: To implement a comprehensive facilities plan that addresses short-term and long-term capital improvement needs and supports learning goals.

New strategies are identified each year that move us forward toward achieving our goals. Progress toward achieving the technology goal in the Strategic Plan is measured by the extent to which technology is used effectively by students and staff in the educational process and by the extent to which the district's entire technology system supports instructional practices, learning, reporting, and communication with the wider community.

III. TECHNOLOGY GOALS

STUDENT LEARNING GOALS

Our students will use technological research tools to locate, collect, evaluate, and analyze information from a variety of sources.

Our students will use technological tools to help with the different stages of the writing process.

We will mesh the National Educational Technology Standards (NETS) for students developed by the International Society for Technology in Education (ISTE) with the technology skills embedded in the Maine Learning Results: Parameters for Essential Instruction to identify the technology literacy skills students will learn at different grade levels, up through grade eight. Technology literacy skills need to be reinforced and expanded upon in grades 9-12.

Our students will present their original ideas in clear, effective ways using technological tools where appropriate and helpful.

Our students will be taught web safety so they can self monitor their web usage.

Our students will be taught how to develop critical skills for reading and viewing information.

CURRICULUM DEVELOPMENT AND INTEGRATION GOALS

Teachers at all grade levels will incorporate word-processing and visual mapping software into the classroom in ways that improve students' writing and expression of ideas.

Our teachers will use modeling and simulation technology to help students develop their thinking skills—critical thinking, information processing, problem-solving, decision-making, communicating, and expressing creativity.

Our students will use technology to express in multiple ways their understanding of concepts and ideas. The technological tools will help students both capitalize on their intellectual strengths and develop new intellectual methods and skills.

Technology will provide all our students with multiple ways to learn—by learning through software programs, learning interactively online, and/or learning over distant learning networks.

Online assessments such as Northwest Evaluation Association (NWEA) and New England Common Assessment Program (NECAP) will be used to monitor student progress and allow curriculum to be modified to meet the individual student needs.

PROFESSIONAL DEVELOPMENT GOALS

Administrators will continue to learn about effective classroom uses of technology and about tools they can use to assess the use of technology in their buildings.

We will analyze the technology needs revealed through the district's technology assessment tools and use the results to inform the professional development approaches used.

We will adopt the National Educational Technology Standards (NETS) for teachers and administrators developed by the International Society for Technology in Education (ISTE) that identify goals and outcomes for teachers' and administrators' levels of proficiency with using technology.

Increased technology professional development will be offered during release time for teachers in every school building. This training will focus on teachers/staff developing activities and units that help students use technology as a tool in achieving identified learning results.

Continued educational technology courses will be offered after school that can be taken for re-certification credit. In these courses, teachers will develop activities and units that help students use technology as a tool in achieving identified learning results.

POLICY GOALS

We will review the district's technology policies annually to determine any need for adaptation.

We will develop a protocol for including informational technology skills in the expectations for hiring new staff.

We will develop expectations for the inclusion of technology skills in teacher professional development plans.

ACCESS AND EQUITY GOALS

A ratio of one computer workstation (or word-processing device) to every five students or better has been established in each school, in order to ensure students have access to concept-mapping and writing tools.

We will continue to install additional wireless networks and wireless devices, where appropriate, to improve students' and teachers' access to technology tools for learning.

We will continue to install interactive devices such as interactive boards and tablets to aid in the delivery of instruction.

Adaptive and assistive devices will be considered in cases where they would meet the needs of special-needs learners.

GOALS TO PROMOTE EFFECTIVE WORK PRACTICES

In addition to pursuing our technology integration goals to improve learning, we will assess all staff's needs for technology and training to perform their work effectively biyearly. We anticipate that this means we will discover needs for data-tracking systems and training in the use of the data systems we already have, among other things.

INFRASTRUCTURE AND SERVICE GOALS

We will continue to perform backbone upgrades (improve the speed and reliability of hardwired systems, switches, and printing devices) to improve network performance district wide.

We will continue to evaluate wireless technology in all schools.

We will continue to upgrade our comprehensive file backup system. We will conduct yearly reviews of our comprehensive security and data recovery plan.

IV. TECHNOLOGY NEEDS & ASSESSMENT [IDENTIFYING NECESSARY TECHNOLOGY]

TECHNOLOGY ASSESSMENT

We use technology use surveys at least every two years to assess how students and teachers are using technology in the curriculum.

We use surveys and portfolio assessments to assess the effectiveness of technology professional development and future training needs.

We plan to develop a survey instrument to use with administrative and office staff to assess their technology equipment and training needs.

The Technology Integration Committee sets priorities every year for how technology funds will be spent, based on the goals and directions outlined in the district's technology plan.

TECHNOLOGY CURRENTLY IN USE

The current inventory (18 February 2010) of major hardware in the Lewiston schools includes:

		Computers			
School	Student Population	Administrative	Classroom	Laptops	Student to Computer
Farwell	373	41	43	163	1.81
Longley	300	35	48	63	2.8
Martel	302	27	54	73	2.37
McMahon	465	32	86	205	1.6
Montello	730	32	122	167	2.52
Geiger	681	32	122	67	2.35
LMS	640	95	65	687	Better than one to one
LHS	1339	161	379	126	2.65
LRTC	550	36	176	0	1.2

School	Networked Printers	Scanners	Projection Units	Servers	Interactive Devices / Other
Farwell	19	2	25	1	23
Longley	11	1	5	1	3
Martel	13	2	6	1	7
McMahon	19	2	16	1	13 (1 Braille computer & printer)
Montello	17	1	12	1	7
Geiger	26	1	41	1	15
LMS	20	3	38	4	8
LHS	29	4	57	0	9 (1 Braille computer & printer)
LRTC	16	1	29	6	

TECHNOLOGY NEEDED TO REACH GOALS

Every year we assess the needs for upgrades to the technology infrastructure and hardware, to keep up with increased demand. Every year we budget some funds to make these continuous improvements. The completion of two replacement schools with modern projectors, classroom sound augmentation systems, and complete wireless coverage has increased the usage of technology in the district. A new state of the art wireless system was installed in the High school giving complete coverage in the building. The middle school's wireless system was upgraded. Additional wireless access devices were deployed in the four other elementary schools which allowed us to increase the wireless coverage in those schools.

Every year we budget significant technology funds to upgrade or replace aging computers. This is an ongoing need that we will address in some measure every year.

Every year the Technology Committee as well as district administrators and building technology committees assess our approaches and uses of technology to determine if new directions or initiatives need to be implemented. It was through this kind of thinking and planning that we began to shift some of the resources used previously to purchase desktop computers to purchase wireless mobile computer carts instead. We continue to implement the mobile cart concept, and we will make more LCD projection units available for teachers to use in classrooms.

Software needs to support the educational mission of the school department are assessed annually as well. Kidspiration and Inspiration software was upgraded. This software helps students visually organize and share their ideas; it's a tool that should help us move forward in our efforts to help students become effective writers (and thinkers). ReadAbout, FastMath and others were also introduced in grades k-6 to assist in improving reading, math and other skills. Professional development workshops about how to use these software's are offered to teachers throughout the year.

Use of the PLATO curriculum (which comes as network software or as online curriculum) has increased, as more students at the high-school level, Adult Education and middle-school students, have been able to take advantage of it. Groups of teachers have been trained in its use during the last few summers.

Blackboard, a comprehensive online solution to learning, is being implemented at our high school. We are using Blackboard's client hosted model. Blackboard is being used in a variety of ways to meet the needs of our students and staff. One way is by providing students who have not necessarily been successful in a traditional school environment an opportunity to attain credit in courses that can be accessed 24/7. Blackboard will also be used for distance education for students within Lewiston Public Schools (LPS) and on a fee basis to those non-LPS students who access courses that are offered. Blackboard is being used to provide academic support for LPS students. Blackboard is being used to create a virtual classroom presence for all classes at the Lewiston High School (LHS). Blackboard has been used for teacher professional development and many staff members are excited to continue using Blackboard for more professional development and staff training.

The district technology committee will consider, as part of its annual work, what software or online curriculum resources should be purchased each year supporting our educational goals most effectively. In order to achieve our goal of having students learn through the use of modeling and simulation technology, additional software and equipment will be needed.

As we push to emphasize technology professional development for teachers and other staff over the next few years, we will also attempt to purchase print and online resources for staff that further support that work. Teachers that receive technical support and print/online resources will be more effective in implementing the new technology skills they learn.

V. COLLABORATION WITH ADULT LITERACY SERVICE PROVIDERS

Lewiston Adult Education (LAE), which is part of the Lewiston School Department, provides adult literacy services to students ranging from Adult Basic Education to GED and High School Diploma to College preparation. LAE obtains grant monies, develops contracts with organizations and businesses and collects student tuition to provide technology training.

LAE offers a wide variety of technology-related classes, ranging in length from 1 day to 15 weeks. Students can take courses to pursue ABE goals, earn diploma credit, acquire workforce training certification credit, add or enhance their technology skills, or obtain training in pursuit of a new career path. In addition, LAE administers an open community lab which provides free access to technology for community members. LAE provides the above mentioned services in three locations: Lewiston High School/Lewiston Regional Technical Center, the Adult Learning Center (located in the Multi-Purpose Center), and the B-Street Community Center.

LAE continues to infuse technology at all instructional levels. Interactive, self-paced learning software is deployed at each of LAE's three locations. Specifically, the PLATO Learning System supports diverse student learning needs in content areas such as math, reading, writing, and science. PLATO is also a highly versatile tool, as it serves both ABE and HSD students equally well. *RosettaStone* language software is utilized in all ESOL classes. It enables students to acquire essential English vocabulary and phrases in a self-paced immersion experience. In addition, LAE offers specialized workplace technology instruction on software packages including the MS Office Suite, Micro Type Pro, QuickBooks, Adobe Creative Suite and AutoCAD. Online courses have also been offered to augment its program. LAE continues to utilize Choices, a computer-based career counseling system, to better prepare students exploring various career options.

LAE will continue to seek out ways in which to employ technology to assist students in meeting their educational goals. In addition, LAE will pursue technology resources which can better inform and deliver curricular objectives.

VI. STRATEGIES FOR IMPROVING ACADEMIC ACHIEVEMENT & TEACHER EFFECTIVENESS

Over the last few years, we continued to install and upgrade network infrastructure, computers, and other hardware. More effort is going into making sure educators have information about what uses of technology are most effective at improving academic achievement, and into providing educators with the training then need to use the available technology tools effectively.

A newly created position of Technology Integrator was created at the high school to aid its teachers in using technology in the classroom. Expanded support to the elementary schools was provided by the Technology Integrator from the middle school by holding tech clinics on technology.

Administrators participate in technology professional development on a regular basis. This professional development is targeted to build administrators' skills and abilities to use technology effectively in their work, based on the National Educational Technology Standards (NETS) for administrators developed by the International Society for Technology in Education (ISTE). Administrators learn about effective classroom uses of technology and about tools they can use to assess the use of technology in their buildings. The technology assessments that administrators do of their buildings will be used to target specific professional developments workshops for the needs in each building. This targeted needs analysis and planning for technology professional development helps to build the capacity of all teachers to integrate technology effectively into curricula and instruction.

We use the National Educational Technology Standards (NETS) for teachers developed by the International Society for Technology in Education (ISTE) as a guide for setting goals for the technology professional development we offer to teachers.

We use grant funds to pay trainers (and to pay substitutes to cover classrooms) while we offer technology professional development to teachers during the regular school day. These trainings require teachers to develop activities and units that use technology effectively to achieve learning goals. We plan to structure more of our future professional development in ways that require teachers to use the activities they develop in their classrooms before coming back together with their training cohort to share their experiences and refine their work.

We will continue to offer after-hours technology workshops on more in-depth educational technology topics. Often we pay teachers a stipend for participating in this training outside of their regular work day. Teachers can earn recertification credit for taking these courses.

More educational resources will be made available to educators on the district web site. The district's web site has become an effective portal for educators to access resources and information that helps them improve academic achievement in their classrooms.

VII. INTEGRATION OF TECHNOLOGY WITH CURRICULA, INSTRUCTION, AND ASSESSMENT

Our goal is that technology will be seamlessly integrated into curriculum initiatives and daily instruction. To reach this goal, several phases of activities will have to take place.

First, all curriculum development efforts will continue to include the identification of appropriate and powerful technological tools as part of the process.

Second, administrators will continue to receive annual training and support so they have a better understanding about what effective uses of technology look like in the classroom. This puts administrators in more of a leadership role when it comes to encouraging the seamless integration of technology within their buildings.

Third, technology assessment tools will be used to identify and prioritize needs for technology professional development, which will be offered to all staff over a period of years.

Software purchases will focus on two basic categories of need. Software identified as significantly beneficial for particular academic needs will be identified and purchased for all appropriate grade levels, giving some consistency to the tools available to students and teachers. Specialized software that aligns with specific targeted units and approaches will be purchased as needed to support those initiatives.

We will take advantage of wireless technology to put more technological tools into the hands of students and teachers in the classrooms where they are doing their work. In addition to the wireless laptops used by all middle school students, teachers and grade 9-12 teachers (courtesy of the Maine Learning Technology Initiative), mobile carts of wireless computers have been deployed in all schools. Grade 4-6 teachers have also been provided laptops for their use in the classrooms.

Budget development for technology expenditures will balance the need for hardware/software tools with the need for professional development.

An ongoing assessment will be done of how well we are staffing the educational technology support needs presented by a district that has rapidly deployed several hundred computers across nine buildings in a few short years. We have added a technology integration specialist at the high school.

INTEGRATION TIMELINE

Timeframe	Activity
Summer 2010	<ul style="list-style-type: none"> • Offer professional development tied to curriculum and technology integration goals. • Install new desktop computers and wireless mobile labs. • Reassign or retire old computers. • Perform annual maintenance on all district computers—cleaning, inventory of software and hardware, and installing security updates.
Fall 2010	<ul style="list-style-type: none"> • Offer professional development tied to curriculum and technology integration goals. • Survey teachers' uses of technology in the curriculum. • Continue to use NWEA testing and data analysis.
Spring 2011	<ul style="list-style-type: none"> • Develop budget for next year that funds achievement of technology integration goals. • Offer professional development tied to curriculum and technology integration goals. • Review district technology policies. • Survey students' uses of technology.
Summer 2011	<ul style="list-style-type: none"> • Offer professional development tied to curriculum and technology integration goals. • Install new desktop computers and wireless mobile labs. • Install server upgrades. • Reassign or retire old computers. • Perform annual maintenance on all district computers—cleaning, inventorying software, installing security updates.

VIII. TECHNOLOGY TYPE AND COSTS, AND COORDINATION WITH FUNDING RESOURCES

ACTION PLAN

New hardware to be added to the Lewiston schools during 2010-2011 includes:

Technology Type	Cost	Funding Source	Purpose
80 new/replacement PC computers	80 x \$760 = \$60,000	local school budget	Replace aging computers district wide.
3 wireless mobile labs w/ 26 computers, projection unit, and printer each	3 x \$30,000 = \$90,000	local school budget	Additional mobile computer carts.
10 new projection units w/	10 x \$600 = \$6000	local school budget	To give additional classroom teachers access to projection units to use with a classroom computer
10 new printers	\$5000	local school budget	To meet the demand for printing services and replace older units.
technology professional development (trainers and subs)	\$15600	Title IID (entitlement)	To train staff primarily in technology integration.
technology supplies, training manuals, documentation & resources	\$25000	Title IID (entitlement)	To support training the staff in technology integration.

The chart above shows how funding from the local school budget and grants will be leveraged together to help us achieve our technology goals.

IX. SUPPORTING RESOURCES

We leverage resources from many sources to maximize our effectiveness at achieving our technology integration goals. Every year, our annual budget shows significant local support for funding technology integration. We raise technology grant funds that amount to \$50,000-150,000 a year.

We are fortunate to have an Electricity program at the Lewiston Regional Technical Center. The instructor of this program serves as a licensed electrician for the school department, and the students in the program provide electrical installation and maintenance services to all of our schools at minimal expense. This helps us meet the electrical needs related to our technology infrastructure in a cost-effective manner.

It is not only money that keeps us moving forward towards achieving our technology integration goals, however. We also use human resources towards this end. One of our elementary schools has a unique partnership with an area business that uses technology to improve students' writing skills

Support contracts purchased and maintained for mission-critical systems including PowerSchool, FirstClass email, Destiny library automation systems, and business office software.

In order to keep the technology used throughout the Lewiston School Department current and effective and running, several areas need constant review and analysis, as well as some regular infusion of supporting resources.

A Technology Integrator position has been created at the Lewiston High School to assist teachers in developing lessons and units with rich technology integration.

X. INCREASING ACCESSIBILITY

Several years ago, when we began adding technology hardware to the schools, our goal was to reach a student to computer ratio (counting student computers, in particular) of better than 5:1. Our concern at the time was that students and teachers have as much access to the technology hardware as possible, for without that, there was no hope that the technology would benefit educational goals.

Now that we have exceeded that original accessibility goal, we will continue to place much greater emphasis on providing staff with the professional development they need to use the technology effectively.

Taking a deeper look into accessibility issues in our schools led us to do the following:

1. In the elementary schools without computer labs, we added mobile carts of computers that greatly increased to accessibility of technology to the students. During the next few years we will need to refresh these carts with newer technology to meet the needs of the students.
2. The high school has inadequate lab space as well. During previous school years we deployed two mobile carts of wireless laptop computers, which teachers borrow for use in their classrooms during lessons/units that would benefit from access to the technological tools. We added four mobile labs to classrooms at the high school allowing core courses access to technology. We installed an up to date wireless network system as we continue to add more mobile technology to improve integration of technology at the High School. During the last year we have added an additional four mobile carts of computers at the high school.
3. Experience has shown us that teachers who have access to a LCD projection unit that they can use with a classroom computer begin to integrate technology in more educationally effective ways, than those without access to a projection unit. Two new schools that replaced two aging schools were equipped with ceiling mounted projectors in all classrooms. The high school has also installed projectors in all their classrooms. Over the last few years we added more projection units so that teachers could borrow them for classroom use. We will continue to add projection units in all schools.
4. We have one elementary school (Longley) with an extremely high poverty rate. (Ninety-six to ninety-eight percent of the students qualify for the free and reduced lunch program.) Most of the students in this school do not have access to a computer at home. We have added mobile carts, a computer lab, equipped the 6th grade classrooms with laptop computers, and added wireless conductivity throughout the building. This level of access to computers and the teacher's skill with technology have helped ensure that students from this school have the technology skills and confidence they will need to hold their own with their peers when they enter the middle school.

Our comprehensive professional development program ensures that technology is integrated effectively into curricula and instruction. Grant money supports our technology professional development program.

1. We will analyze the technology needs revealed through the district's technology assessment tools and combine the results with current information about effective uses of technology to inform the professional development approaches used.
2. We adopted existing models (for example, ISTE) that identify goals and outcomes for teachers' and administrators' levels of proficiency with using technology.
3. Technology professional development is offered during release time for teachers in every school building. This training focuses on teachers developing activities and units that help students use technology as a tool in achieving identified learning results. These trainings include follow-up sessions during which teachers reflect on and share their experiences integrating technology and model the units they developed.
4. Educational technology courses are offered after school and during summers that can be taken for re-certification credit. In these courses, teachers develop activities and units that help students use technology as a tool in achieving identified learning results.

XI. PROMOTION OF VARIOUS CURRICULA AND TEACHING STRATEGIES THAT INTEGRATE TECHNOLOGY

We believe that a few key strategies must be pursued simultaneously in order to ensure that technology is integrated effectively with current curricula and effective teaching strategies:

1. When specific curriculum areas undergo comprehensive review and revision, relevant technology is a key piece of the research that is done and the recommendations that are made.
2. Both professional development workshops and courses are offered to teachers to help them incorporate the strategies and technologies found to be the most effective.

The advisability and feasibility of five other strategies will continue to be explored over the next three years:

1. Including technology criteria in teacher and administrator hiring and evaluation processes,
2. Requiring the inclusion of technology criteria in teachers' professional development plans, and
3. Hiring more technology integration specialists to support teachers' work to integrate technology in their practice.
4. More technology information and support materials will be developed and made available to educators through the district's web site.
5. Technology can be a valuable tool for assessment. The District will use the NWEA system for grades 1-10.

XII. PROFESSIONAL DEVELOPMENT

Administrators will annually participate in technology professional development that helps them learn about effective classroom uses of technology and about tools they can use to assess the use of technology in their buildings. The technology assessments that administrators do of their buildings will be used to target specific professional development workshops for the needs in each building. This targeted needs analysis and planning for technology professional development will help build the capacity of all teachers to integrate technology effectively into curricula and instruction.

Targeted technology professional development workshops will be offered to teachers during the regular school day, during the summer and online options will be explored. These trainings will require teachers to develop activities and units that use technology effectively to achieve learning goals. They will use the activities they develop in their classrooms before coming back together with their training cohort to share their experiences and refine their work.

We will continue to offer after-hours technology workshops on more in-depth educational technology topics. Teachers can earn recertification credit for taking these courses.

Technology trainings for library educational technicians will be designed specifically around their needs and the needs of the users of the schools' library/media centers.

Technology information and resources will be made available to educators on the district web site.

XIII. INNOVATIVE DELIVERY STRATEGIES

During the last three years, the use of PLATO learning software has increased. PLATO learning software, which can be used as network software or as online curriculum, allows students to achieve learning results and demonstrate their knowledge at their own pace. The online component of PLATO allows students to learn at times that work best for them. Blackboard, a web based course delivery system is being developed to provide 24/7 access to high school curriculum.

Read180 has been used at the Middle School to aid slow readers in developing improved reading skills.

ReadAbout was installed in McMahan , Montello, Martel, Geiger and Farwell to assist slow readers. FastMath has been installed in Martel, McMahan, Montello and Longley

With the phase out of the ATM system, a replacement video conferencing system was acquired with grant monies, which provides our High School staff and students access to courses, and virtual field trips they would not have access to otherwise. Addition distance learning equipment will be sought with additional grants for the elementary schools and will be utilized to allow virtual field trips to aid in their education.

Lewiston Adult Education continues to offer online courses to its students. The feasibility and advisability of making online learning available to more of our student population will be continued to be explored over the next three years.

XIV. ACCOUNTABILITY MEASURES

For several years now, the Lewiston School Department has used a self-assessment tool with teachers to assess how teachers and students throughout the district have been using technology. This tool, which focuses on the curricular uses of technology, gives us one view of technology use in the district.

Over the next three years, existing accountability measures will be used to help us determine how effectively technology is being used in the district, and which professional development and implementation strategies are more effective:

1. Administrators will use assessment tools to perform annual technology audits of how technology is used by the teachers and students in their buildings. The results of these audits will be used to target professional development strategies for particular buildings.
2. Every technology professional development workshop and course will require teachers to develop lessons and units for their students. These lesson/unit resources will be made available to other teachers—building a bank of technology resources for teachers to access.
3. The possibilities for including technology requirements in teachers' professional development plans will continue to be explored.

Yearly review of the technology plan will allow adjustments to be made to make this plan more effective.

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