

LITTLE WOUND SCHOOL
TECHNOLOGY PLAN
2014-2017



PO Box 500
Kyle, South Dakota 57752

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LITTLE WOUND SCHOOL TECHNOLOGY PLAN

For Period July 2014 through June 2017

I - PURPOSE

The primary purpose of this technology plan is to provide direction for the use of technology in education at Little Wound School. The plan will:

- define goals and strategies for the integration technology into the curriculum to improve the educational program;
- outline a strategy for professional development commensurate with the new technologies;
- present a general assessment of the telecommunication services, hardware, software and other services that will be needed;
- identify the financial resources required to fully enable necessary and acquired technology including, hardware, software, professional development, and other services that may be needed; and,
- Institute an evaluation process to monitor progress toward the accomplishment of the established goals and to guide program modifications in response to emerging technology developments.

The planning team has developed a vision statement and goals that details the need for technology in education. Technology gives teachers the ability to take a more innovative and creative approach to instruction. The wide spread application of technology in today's workforce demands that we prepare students to succeed in this environment. This vision led the team to focus on curriculum, infrastructure and professional development.

The purpose of bringing technology into the educational environment is to ensure graduates of Little Wound School are able to utilize the existing technologies in their work, family, and community lives. This became the basis of our technology plan.

The Little Wound School Technology Plan identifies specific goals, objectives, and activities and provides a method of evaluation. The plan will be revised as necessary as we make progress toward reaching our goals and objectives.

II - INTRODUCTION

School Mission:

The mission of Little Wound School is to provide a sacred environment for students to achieve academic and Lakota language and cultural excellence.

Little Wound School recognizes the importance of an education for the future leaders of the Oglala Lakota Nation. Therefore, we will continue to provide for the needs of the individuals and incorporate the Lakota value in assisting students to acquire academic and social skills necessary for a productive life in modern society.

School Goals:

- All children will read independently by the third grade
- 70% of students will be proficient/advanced in Reading and Math
- Individual student attendance will be 90% or higher
- Students will demonstrate knowledge of their Lakota culture and language to improve academic achievement
- There will be increases in enrollment, retention (80%), graduation, placement and postsecondary success
- Increased community and parental inclusion
- Students will feel safe and secure in their environment

III - BACKGROUND SUMMARY

Little Wound School is an Oglala Lakota tribally chartered grant school funded by the Bureau of Indian Affairs located in Kyle on the Pine Ridge Indian Reservation in southwestern South Dakota.

Little Wound School enrolls and serves more than 800 pre-school-12th grade students annually. There are an estimated 170 school employees. It is one of four high schools on the Pine Ridge Indian Reservation serving area elementary feeder schools. Besides serving the immediate community of Kyle, students are transported in from seven of the nine districts on the Pine Ridge Indian Reservation.

a. School Campus

The Little Wound School consists of three main school facilities – high school, middle school and the elementary. Built in the early 80's for an enrollment of 200 students, the high school building cannot accommodate the number of students enrolled and therefore has four temporary trailer classrooms. The middle school was temporarily constructed in the early 90's by the school itself to provide more classroom space to accommodate the growing enrollment of middle school students. The elementary school which is the oldest of the three schools was constructed in the 40's with two major renovations done in the 70's to add more classroom space and another

renovation in the late 80's to remodel some of the older areas of the school and provide a transportation and maintenance facility.

Other outer buildings include temporarily mobile units to provide space for offices and programs.

Efforts to get a new school have been unsuccessful.

b. Infrastructure

Local Area Network (LAN)

The fiber optic local area network connects all classrooms on the main campus including all administrative office buildings.

Five wireless bridges provide access to buildings outside the LAN.

In 2013 LWS has upgraded the wireless LAN infrastructure to 802.11n standards. Core switch fiber connections to distribution switches are rated at 1GB. Two of the larger distribution IDF's are connected with fiber rated at 10GB's. Two of the smaller IDF's have 1 GB copper connections. Plans to upgrade switching infrastructure in the summer of 2014 have been completed utilizing eRate funding.

The wide area network is accessed through a 40 mbps high speed internet connection.

Currently the LAN consists of:

There are nine hardware servers on the network:

1. HP Proliant DL380 – DNS server running Server 2008
2. HP Proliant DL380 – DHCP server running Server 2008
3. HP Proliant DL380 – Mail server running Server 2008
4. HP Proliant DL380 –Server 2008. Hosting the network backup
5. HP server supporting the Telephone System.
6. HP Proliant DL380 – Profile Storage Server
7. HP Proliant DL380 – Futex - Server 2003
8. IBM x3650 – VMWare Host
9. IBM x3650 – VMWare Host 2

Other components on the LAN include:

- Fortigate 200A – Firewall/Content Filter
- SonicWall CDP Local Backup Appliance
- Dakota Backup (Off campus backup)
- HP Tape Backup (Local)
- 1 MDF & 21 IDFs located throughout the campus
- HP Procurve Switches

- APC Symmetra LX Battery Backup Unit
- TrippLite UPS are located at each of the 21 IDF locations
- Meraki MR Series Wireless Radio Ports throughout campus
- There are 1300 CAT6 data drops and 250 CAT6 phone cables located in 562 locations campus wide.

Computers:

The network currently supports 471 PCs running Windows 7 and Windows 8. The network also supports 145 Apple iPads. Network servers are running Windows 2003, 2008 and 2012 Server. Two servers host VMWare application servers.

- Approximately 22% of the computers are over six years old. It is anticipated approximately 80 computers will be removed from the inventory this year. During the 2014-2015 school year, computer upgrades will replace older inventory.

	#Students	#Computers	#Student computers	#iPads
Elementary (K-5)	370	150	121	20
Mid School (6-8)	169	97	57	60
High School (9-12)	427	177	115	60
Other Depts*		47		5
TOTALS:	966	471	293	145

(*includes support programs and administrative personnel offices where students do not have access to computers)

Printers:

The network supports 50 HP, Kyocera and Brother Network printers.

c. Telecommunications:

The school supports an Avaya telephone system. The system runs Avaya IP Office 500 which provides management of the phone switch.

IV - TECHNOLOGY PLANNING TEAM

Planning team members include the following: IT Director, Network Administrator, NASIS Administrator/Human Resources Director, Superintendent, Business Manager, School Improvement Specialist, Principals.

V - TECHNOLOGY STRATEGIC PLAN

In February 2013 the Little Wound School Board approved a comprehensive technology audit. This process included online student and teacher surveys, focus groups of students and teachers, interviews with key school leaders, onsite observations and a technology infrastructure assessment.

Based on the findings and recommendations of the audit, the following strategic plan have been developed to address the recommendations of the audit as well as the vision Little Wound School has for graduates.

Vision:

Graduates of LWS will be able to utilize existing technologies in their work, family, and community lives.

Goals:

1. Little Wound School Administration will assure technology planning and implementation is aligned with curriculum development and school improvement activities.
2. The curriculum at LWS will assure that graduates have mastered the skills and knowledge necessary to use the technologies available to them.
3. The administration, school board, faculty, students and parents of LWS will participate in ongoing investigation and adoption of developing technologies.
4. Technologies available to students and faculty at LWS will reflect the technologies needed to function in society.

VI - ADMINISTRATION

Goal 1: Little Wound School Administration will assure technology planning and implementation is aligned with curriculum development and school improvement activities.

Objective 1: A technology “integrationist” will be available to oversee technology integration and work with instructional staff to effectively utilize technology in the teaching and learning process.

Objective 2: Identify technology committee with K-12 representation.

Objective 3: Technology committee to meet regularly on curriculum integration, budget and purchasing, network infrastructure, assessments, professional development and planning.

Objective 4: Regular meetings with school improvement team (who will also act as technology committee) to discuss integration efforts.

VII - CURRICULUM

Goal Statement 2: The curriculum at LWS will assure that graduates have mastered the skills and knowledge necessary to use the technologies available to them.

Objective 1: Integrate technology standards in existing curriculum.

Activities:

1. Identify committee consisting of teachers to develop plan for implementing K-12 technology standards across grade levels and subject areas.
2. Align technology standards with curriculum and incorporate standards in evaluation and assessments.
3. Modify assessment and reporting to include the adopted technology standards.
4. Monitor evaluation and assessments to assure students are mastering standards.

Objective 2: Teacher observation tools will include a technology integration component.

Activities:

1. Observation tool will be modified to include a technology component for observation by principals.

Objective 3: LWS will conduct annual assessment of technology equipment use in classrooms.

Activities:

- 1 Upgrade computers in classrooms to assure students are using current technologies to support integration of standards in classroom curriculum.
- 2 Identify problematic areas and plan for improvement.

Objective 4: LWS will review emerging technologies for emersion into curriculum.

Activities:

1. Ongoing research and evaluation of new technologies.
2. Incorporate new technology into curriculum/classroom.
3. Provide training and support.
4. Evaluate outcomes of progress.

Objective 5: Provide alternative opportunities to supplement curriculum requirements.

Activities:

1. Utilize Edgenuity coursework for credit recovery.
2. Identify other alternatives for online instruction as needed.

VIII - PROFESSIONAL DEVELOPMENT

Goal Statement 3: The administration, school board, faculty, students and parents of LWS will participate in ongoing investigation and adoption of developing technologies.

Objective 1: Provide professional development for teachers.

Activities:

1. Identify training needs through technology training assessment.
2. Identify onsite professional development opportunities for teachers.
3. Implement a mentorship program that identifies “technology savvy” teachers to mentor other teachers.
4. Attend technology conferences i.e. T.I.E., ISTE, etc.

Objective 2: All faculty, staff, administration, and parents will be able to utilize core technologies at LWS.

Activities:

1. Identify core technologies skills for faculty, staff, administration and parents.
2. Develop tutorials for each of the core technologies and make available to faculty, staff, administration and parents in various formats.
3. Provide training at staff pre-service activities.

Objective 3: All faculty, staff, and administration will master job specific core technologies.

Activities:

1. Complete skills assessment of core technologies of faculty, staff and administration.
2. Schedule ongoing training opportunities for core technologies
3. Complete skills assessment of core technologies of faculty, staff and administration.

Objective 4: Prepare faculty for integration of new classroom technologies for upcoming school year.

Activities:

1. Identify training needs based on technology standards.
2. Collaborate with colleges/universities to develop summer coursework to utilize classroom technologies.

3. Attend technology conferences to keep abreast of new emerging technologies & practices

Objective 5: Develop technology mentorship component for each school.

Activities:

1. Technology mentors will assist teachers with classroom integrated technologies.

Objective 6: All faculty, staff, administration, school board, and parents will understand the LWS Internet safety and security guidelines.

Activities:

1. Review existing technology policies and make appropriate recommendations for revisions or new policies.
2. All users will read and sign an Internet User Agreement form.
3. All NASIS users will take the FISSA certification exam.
4. Students will participate in age-appropriate Internet Safety awareness activities.
5. In-service provided to faculty, staff, administration, school board and parents on the Children Internet Protection Act (CIPA)

IX - INFRASTRUCTURE

Goal Statement 4: Technologies available to students and faculty at LWS will reflect the technologies needed to function in society.

Objective 1: Stabilize and standardize the local area network.

Activities:

1. Monitor network and users for security.
2. Renew network applications: Anti-virus, email, firewall.
3. Repair hardware breakdowns in timely manner.
4. Update LWS Computer Network Disaster Recovery & Backup Plan.
5. All users sign an Internet User Agreement before accessing network.
6. All NASIS users will take the security awareness test before accessing NASIS.

Objective 2: Apply for eRate discounts for internal connections, telecommunications, internet access and basic maintenance.

Activities:

1. Annually assess network needs including upgrades, expansions, and maintenance agreements.
2. Submit eRate applications for discounts in internal connections, internet access, telecommunications and maintenance support as needs are identified each year.

3. Maintain an accurate and complete file of all eRate documents and USAC correspondence.

Objective 3: Define classroom configurations based on technology standards.

Activities:

1. Define appropriate computer-student ratios for each school.
2. Identify classroom equipment replacement schedules.
3. Define peripherals required for grade appropriate technology use
4. Upgrade student computers.

Objective 4: Update technology department manual.

Activities:

1. Define standard operating procedures for department.
2. Develop standard policies and best practices for installations, upgrades, maintenance, and software licensing.
3. Create a knowledge base of troubleshooting network, computers, operating systems, applications and hardware. (Spiceworks)

Objective 5: Evaluate the management and service of the telephone system.

Activities:

1. Maintain current telephone system.
2. Submit eRate application for telecommunications and maintenance support of telephone system

X - EVALUATION AND ASSESSMENT

The plan will be assessed annually using a number of tools to measure the effectiveness of the plan. Such tools will include:

- Curriculum & Standards Reviews: will determine standards integration in the curriculum and how they are working.
- Teacher observations & evaluations: Principals will use observation tool and document results.
- Lesson plans: lesson plans will have a technology component for review and assessment.
- Student and staff surveys: surveys will determine the perceptions by students and staff in their use of technology in instruction.

- Professional development participation: documented participation in professional development will identify additional training needs.
- Mentorship program evaluation: instructional staff will provide an evaluation of the effectiveness of the program.
- Technical support of hardware and software: support tickets will be assessed to determine infrastructure and hardware/software problems.
- Technology audit: a new audit will be planned to determine the status of technology integration.

The strategic plan will be reviewed annually using the above assessments to determine problematic areas and to do corrective actions to assure the integration process continues.

XI - TECHNOLOGY BUDGET

Budgets and line items will be reviewed and adjusted each year once actual allocations can be determined.

2014-2015

	Curriculum	Infrastructure	Professional Development	Telecommunications	Support & Maintenance	Personnel
Software Costs	10,000.00	10,000.00				
Network Software, Email, Anti Virus, Firewall	10,000.00					
Supplies	5,000.00					
Backups					7,000.00	
Hardware upgrades		300,000.00				
Network Maintenance/Support					15,000.00	
High Speed Internet		71,000.00				
Tele/Fax/Cell Cost				50,000.00		
Coursework/Training			20,000.00			
Conferences			15,000.00			
Salaries/38%Fringe (3tech)						176,730.00
TOTAL:	25,000.00	381,000.00	25,000.00	50,000.00	22,000.00	176,730.00

In the spring of each year, the budget for the upcoming school year will be developed based on the projected technology budget needs of this plan.

eRate:

During the 2014-2015 school term, the Little Wound School seeks an eRate discount as follows:

- Telecommunications to support the existing telephones and cellular phones. The estimated cost is \$50,000.00
- Internet Access to support the existing high speed internet monthly reoccurring costs. The estimated cost is \$71,000.00
- Basic Maintenance to support maintaining the local area network & telephone system. The estimated cost is \$22,000.00
- Internal Connections – Network infrastructure upgrade of network estimated cost is \$300,000

Little Wound School qualifies for a 90% discounted rate. See the attached 2014-2015 projected budget that identifies the commitments from school programs to support the technology plan, including line items that will provide the remaining 10%.

2014-2015 School Program Budget Commitments to Plan

Funding Source	eRate 10%	Curr. software	Network software	supplies	backups	Hardware upgrades	Network Upgrades	Network/Tele Maint/Support	High speed internet	Telephone/Fax/Ce ll Service	Professional development	Technician Salaries & Fringe	for Salaries & Fringe
ISEP	5,000		6,000	2,500	2,000	15,000	2,000	3,000	35,000	37,250		176,730	
Title I	10,000	8,000	500	2,500	1,500	10,000	3,000	5,000	25,000		10,000		
Title II	5000		2,000	500		5,000	2,000	4,000	2,000		10,000		
1003G	2,500			1,000		3,000	1,000		1000	1,000	2,500		
Title IV													
Transport.	500							500		800			
FACE						1,500							
Sp. Ed-Part B	5,000	2,000	1,000	2,000	1,500	7,500	1,500	2,000	7,000	2,500	2,500		
Admin.Cost	2,500		500	500	2,000	2,500	500	500	1,000	5,950			
Facilities	500			500		500				2,500			
TOTALS	30,000	10,000	10,000	10,000	7,000	50,000	10,000	15,000	71,000	50,000	25,000	176,730	

2015-2016

	Curriculum	Infrastructure	Professional Development	Telecommunications	Support & Maintenance	Personnel
Software Costs	10,000.00	10,000.00				
Network Software, Email, Anti Virus, Firewall	10,000.00					
Supplies	5,000.00					
Backups					7,000.00	
Hardware upgrades		50,000.00				
Network Maintenance/Support					15,000.00	
High Speed Internet		71,000.00				
Tele/Fax/Cell Cost				50,000.00		
Coursework/Training			10,000.00			
Conferences			5,000.00			
Salaries/28%Fringe (3tech)						182,030.00
TOTAL:	25,000.00	131,000.00	15,000.00	50,000.00	22,000.00	182,030.00

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2015-2016 School Program Budget Commitments to Plan

Funding Source	eRate 10%	Curr. software	Network software	supplies	backups	Hardware upgrades	Network Upgrades	Network/Tele Maint/Support	High speed internet	Telephone/Fax/Ce II Service	Professional development	Technician Salaries & Fringe	Mentor Salaries & Fringe
ISEP			6,000	4,500	2,000	15,000	2,000	3,000	35,000	37,250	5,000	182,030	
Title I		8,000	500	2,500		15,000	2,500	5,000	25,000	500	10,000		
Title II			2,000	1,000		4,000	2,000	4,000	2,000		5,000		
1003 G					2,000	3,500	500	500	1,500	500	1,000		
Title IV													
Transport.										800			
FACE						1,500							
Sp. Ed-Part B		2,000	1,000	1,500	1,500	8,000	1,500	2,000	6,000	2,500	3,000		
Admin.Cost			500	500	1,500	2,500	1,500	500	1,000	5,950	1,000		
Facilities						500			500	2,500			
TOTALS		10,000	10,000	10,000	7,000	50,000	10,000	15,000	71,000	50,000	25,000	182,030	

2016-2017

	Curriculum	Infrastructure	Professional Development	Telecommunications	Support & Maintenance	Personnel
Software Costs	10,000.00	10,000.00				
Network Software, Email, Anti Virus, Firewall	10,000.00					
Supplies	5,000.00					
Backups					7,000.00	
Hardware upgrades		50,000.00				
Network Maintenance/Support					15,000.00	
High Speed Internet		71,000.00				
Tele/Fax/Cell Cost				50,000.00		
Coursework/Training			10,000.00			
Conferences			5,000.00			
Salaries/28%Fringe (3tech)						187,491.00
TOTAL:	25,000.00	131,000.00	15,000.00	50,000.00	22,000.00	187,491.00

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ISEP			6,000	2,500	2,000	15,000	2,000	3,000	33,000	37,250	5,000	187,491	
Title I		8,000	2,000	2,500		15,000	2,500	5,000	25,000	500	10,000		
Title II				1,500		4,000	2,000	4,000	5,000		5,000		
1003 G			500	1000	2,000	2,500	500	500	2,500	500	1,500		
Title IV													
Transport.										800			
FACE				500		1,500							
Sp. Ed-Part B		2,000	1,000	1,500	1,500	6,000	1,500	2,000	4,500	2,500	2,500		
Admin.Cost			500	500	1,500	5,500	1,500	500	1,000	5,950	1,000		
Facilities						500				2,500			
TOTALS		10,000	10,000	10,000	7,000	50,000	10,000	15,000	71,000	50,000	25,000	187,491	