## Lake Tahoe Unified School District Education Technology Plan

July 1, 2012 - June 30, 2015



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## Background and Demographic Profile

The Lake Tahoe Unified School District (LTUSD) is a public school district currently serving approximately 3,858 students in grades K-12. There are four elementary schools, with one middle, one comprehensive high school, and two continuation high schools. District student demographics reflect 49% Caucasian, 41% Hispanic, 28% English Learners, and 62.5% of students qualifying for Free & Reduced lunch.

Originally, the District chose to implement a research-based program called THE NEXT STEP in Grades 4, 5, 6, 7, and 8 at all four elementary sites and at the one middle school. This program has been expanded to include grades 3-12. THE NEXT STEP program integrates technology into the curriculum in support of academic content standards and increases gradelevel proficiency in three targeted subgroups: Hispanic, English Learners, and Socioeconomically Disadvantaged. Participating teachers receive 1:1 professional development in education technology and its use in reading/language arts and math. Technology has been integrated into the core content areas in order to reinforce and extend learning. Students participating in THE NEXT STEP program utilize Netbooks at a 1:1 ratio in grades 3-12, with access to Microsoft Live@edu via Wi-Fi and cell connectivity. Browser-based Netbooks allows students, teachers and parents to receive instruction online and sharing work through Microsoft Live@edu. Netbooks at a 1:1 ratio not only enhances, but increases each student's learning opportunities. Students check out a Netbook at the start of the school year and are allowed to take their Netbook home with them every day. The home-school connection is truly a unique opportunity for targeted student subgroups to increase and extend learning time. There has been a significant increase in parent communication and involvement with each student's school site. AT&T Data Services has provided a portal for network access. The computer-assisted, internet based, online instruction includes software programs such as MS Word, Type to Learn, Inspiration, BrainPop, Tumble Book, Ticket to Read and Accelerated Reader for reading comprehension.

### 1. Plan Duration

The plans duration is from July 1, 2012 to June 30, 2015. This plan is to qualify for e-rate and will be reviewed annually.

#### 2. Stakeholders

The Planning Team obtained input from district stakeholders through meetings, work sessions and surveys. The stakeholders consulted included:

- *Students*. District Technology Trainers obtained input about the use of technology at school sites from students. Follow up was done with student surveys designed to collect input from students regarding their technology use in school, at work, and at home.
- *Parents*. District parent input was utilized in the development of the plan, utilizing the results of the Parent Survey. The Parent Survey collected input about importance of a 21st Century Learning Environment for their child, the value of increased access to technology and the need maintain updated online curriculum and equipment.
- *Teachers*. Teachers were able to provide input to the development of the plan through online discussions and surveys, and Professional Development sessions with the District Technology Trainers. Teachers also took the district Technology Survey, an online survey that collected input about technology use and needs from teachers, teachers' aides, site administrators and staff.
- Administrators and staff. Site principals and other administrators provided input to the technology plan through planning discussions in their leadership meetings and at their schools, and by completing the District Technology Survey. Site Principals also were given the opportunity to review and comment on a draft of the plan before its submission.
- *Community members*. Community members' input concerning the use of technology in elementary and secondary education was obtained through a community survey.
- Board of Education: Input regarding the strategic plan for technology was provided through the development of the Board Governance Policy Operational Expectations for the use of technology to support student learning.

In addition, a number of stakeholders volunteered to read and provide feedback to a draft of the Educational Technology Strategic Plan. Their comments and edits have been incorporated into the final version of the plan.

## 3. Curriculum

## 3a. Description of teachers' and students' current access to technology tools both during the school day and outside of school hours.

Currently the minimum technology teachers have in their classroom is one computer with Internet access. This computer is also used for record keeping and communication. All elementary classrooms (grades K-5) have a SmartBoard interactive whiteboard with a document camera. At the middle school and high school levels, approximately half of the classrooms have SmartBoard interactive whiteboards and document cameras. All middle school and high school classrooms that do not have a SmartBoard have a LCD projector. All certificated employees have access to email and calendar features through Microsoft Exchange. Teachers in grades K-12 use the online SIS ABI (Aeries Browser Interface) for inputting student attendance. The online SIS ABI is also used for inputting grades at the middle school and high school level. A K-6 Report Card system has been implemented for the past three years; however the report cards for these grades have not been developed through our Online Assessment Reporting System (OARS) or SIS systems.

Data is collected through continuous formative assessment throughout the year. In addition, students in grades 3-8 are assessed via the Standards Progress Assessment (SPA) at each site for evaluation of student progress three times a year. Teachers and administrators meet on a regular basis to review the data and plan for instruction. These meetings take place in several configurations throughout the month – whole staff, grade level, department and administrative.

Technology is currently available to all students in LTUSD. All students in grades 3-12 are checked out a Netbook at the start of the school year through the library, similar to checking out textbooks. All Netbooks have both Wi-Fi and cell connectivity capabilities. In addition to being used in the classroom, Netbooks are allowed to go home with every student. Students who don't have internet access at home are able to connect to the internet through the Netbook's cell card using AT&T's cellular network. Grades K-2 have at least 4 desktop computers in their classrooms as well as access to laptop carts. Computers are available after school hours at each site on a limited basis. According to a 2008 middle school survey, 90% of students report that they have access to computers and other hardware at home. Computers and computer labs are available in the community and are also available at the El Dorado County Library, Lake Tahoe Community College, Family Resource Center, and the Boys and Girls Club. While students from higher poverty level attendance areas have more access to technology at school, these students have less access to computers at home. In addition, because South Lake Tahoe is a seasonal resort community with a high transiency rate, students often do not have access to technology at home because home may be a motel room or trailer. With the introduction of Netbooks, we have been able to bridge this divide. LTUSD provides technology resources for students with special needs, such as low vision, adaptive considerations, support for English language learners, and remedial support for students at our five Schoolwide Title I schools. The chart below summarizes student access to computers district wide.

Table of Technology Available by Site

Schools	Total Computes	Student / Computer Ratio (Grades K-2)	Student/ Computer Ratio(Grades (3-12)	Computer Classrooms	Computer Labs	Computer Library/Media	Mobile Laptop Cart	Classroom Connected
Tahoe Valley	273	4:1	1:1	67	None	None	None	Yes
Bijou	286	4:1	1:1	70	None	Yes	None	Yes
Lake Tahoe Environmental Magnet	266	4:1	1:1	16	None	None	60 laptops on 3 carts	Yes
Sierra House	354	4:1	1:1	75	Yes	None	40 laptops on 3 carts	Yes
South Tahoe High School	1212	NA	1:1	60	Yes	Yes	None	Yes
South Tahoe Middle School	992	NA	1:1	50	Yes	Yes	60 laptops on 3 carts	Yes

# 3b. Description of the district's current use of hardware and software to support teaching and learning.

Computers are used in various ways to support instruction and student learning in all curricular areas. For example, depending on computer access at individual sites and within individual classrooms, students access math practice activities via the Internet. During core content classes, students also regularly access web based math, science and social studies activities provided by newly adopted textbooks. A growing number of classroom teachers are providing students with opportunities for online research, collaboration, and presentation activities (as defined by ISTE NET\*S) within the content area. All sites use the following programs: BrainPop, California Learns, Teacher Web and OARS. Elementary and middle school also use the following programs: Accelerated Reader, Read Naturally, Read 180, IXL, Spelling City, Writing Roadmap, Ticket to Read and Reflex Math. The High School uses Study Island, Odyssey Ware and Accelerated Math.

The longstanding vision for Technology in LTUSD centers around four standards. Meeting these standards ensures that all employees in the district have access to reliable technology and training on how to use it. The specific standards listed support our future direction with respect to technology. The purpose of these standards is to meet the needs of and to provide leadership to LTUSD.

**Standard One:** Maintain our implementation plan ensuring that 100% of our employees have access to email. This would require that each classroom has at least one computer meeting our minimum standards and that at least each work area has a communal computer that employees could use to check their email (for those that do not have traditional office areas). Providing

email to all our employees on computers that meet our standards is the single most important thing we can do to support the process of integrating technology in our district. It has an immediate impact on improving service to our schools.

Email provides employees a practical benefit to using technology. It saves them time. It increases the speed at which they are informed with district news and information. It increases all employees' ability to gather information quickly (online surveys). It lowers the cost of distributing information (electronically versus paper). Parents, students, and staff benefit from improved communication and access to teachers.

**Standard Two:** Continue to provide quick and convenient access to data for all with a verifiable need for such access.

Most visibly at the sites, this has come about through our migration to our web based student information system, AERIES. By integrating our standard grade book software, with this system we are in effect providing quick and convenient access to data for teachers, administrators, and parents.

Teachers and administrators throughout the district save time through AERIES because they are able to:

Complete attendance online in the classroom.

Upload their grades automatically.

Access test score histories on their students very quickly.

Access a variety of data they need to improve their instruction.

Many of our parents have secure access to grades and homework assignments via the Internet.

**Standard Three:** Continue to ensure that district technology is well supported and sustainable. Technology must become as reliable as turning on the lights. Just as there are custodians for every school in the district, if we are to implement and maintain a technology system to support the district, we must become the custodians of our technology. The infrastructure and machines must be supported and maintained if any plan for its sustainability is to be prudent.

In 2011, LTUSD deployed a new tracking system for technology problems known as "The Help Desk." Each site has a technology representative who is the first line of defense in identifying and remedying any technology issues at their school site. If the Tech Rep is unable to resolve the issue, they submit an email to "The Help Desk". These emails are prioritized on a spreadsheet the spreadsheet is sent out electronically to the IT team on a daily basis. This has already provided a tremendous benefit to schools by lowering response times for support and by aiding in problem solving. It also serves as an invaluable training tool for our Technology Integration Support Specialists and other support staff when they are providing one-on-one support. While the deployment of "The Help Desk" has greatly improved our efficiencies in response time to support issues, with the rapid technology growth in the district, it will not solve all our support issues. Staff will need to be added over time to ensure that response times are

maintained at a reasonable level and that our infrastructure is properly supported and managed. We will also look towards alternative technologies such as virtual desktops in order to expand usage without expanding support requirements.

Standard Four: Develop an implementation plan to provide a professional learning plan that links and synergizes state requirements with our district needs. In order to use computers and accompanying software productively, teachers need access to initial and ongoing training. Professional development is an extremely important item in the process of integrating technology in the district. We recognize the need to provide a variety of training opportunities and models in order to support the individual learning styles and needs of our growing technology needs. We also recognize that professional development continues to be a key element in enhancing teacher effectiveness and school improvement. As we move forward we will expand opportunities for online learning for our employees.

### 3c. Summary of the district's curricular goals that are supported by this tech plan.

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LTUSD has adopted the state content standards in all subjects as the basis of all curriculum and instruction. Research-based programs and strategies that enable students to succeed in meeting standards drive the implementation of the standards and the curricular goals in the district. The district utilizes a system for assessing student progress and improving or changing programs until all students are reached effectively. Each content area has developed a systemic K-12 approach and detailed strategies for implementation across grade levels, subject areas, and schools. The effective utilization and integration of educational technology is essential in helping students at all levels to succeed in meeting standards. This Educational Technology Strategic Plan focuses on integrating technology systemically into the K-12 curriculum.

The district's curriculum goals are directed toward providing for all students the highest quality teaching, the richest learning environment, and sufficient time to meet high standards. The district curriculum goals include:

- 1. High Expectations for All Students: Through broad commitments to well-defined curriculum, content standards, and technology access, we will raise the expectations for achievement for all children.
- 2. District-wide Strategies to Prevent School Failure: Through professional development that includes direct training, classroom coaching, and collegial reflection, our teachers will deepen their knowledge and expertise in conveying the curriculum, and all students in their classrooms will benefit from improved instruction.
- 3. Intervention Strategies to Assist Students Who Are Struggling: LTUSD is implementing a Response-to-Intervention (RTI) model in which early identification, parent involvement, and appropriate tiered support will provide literacy and mathematics strategies and other academic programs within and beyond the instructional day and year.

- 4. Retention and Support Strategies to Accelerate the Learning of Students Who Have Fallen Behind: Through a program of accelerated study and extended learning time at key grade levels, students who are significantly below grade level will have the opportunity to catch up with their peers early in their school careers.
- 5. Leadership Strategies to Ensure Academic Success in Every Classroom: Through ongoing leadership development of principals, vice principals, subject supervisors, and district curriculum coordinators, progress toward the goals will be directed and sustained at every school.

Implementation of the district's Educational Technology Strategic Plan will support the achievement of these curriculum goals by making technology available and training teachers to utilize it to improve instruction, provide academic support for students who are struggling, offering opportunities to accelerate learning for students who have fallen behind, and to facilitate the communications needed for successful leadership.

### Academic Content Standards, District Curriculum Frameworks, and Programs of Study

The district has adopted the California Department of Education's (CDE) Content Standards in English language arts, mathematics, history-social science, science, visual and performing arts, and English language development.

The state standards are used as the written curricula that describe for teachers what students must know and be able to do in each subject. District curriculum, student level assessment, textbooks, instructional materials and professional development activities are all aligned with the standards. Content standards may be accessed through the state (CDE) and district websites, so they are accessible to parent and community members, as well as teachers and students. High quality instructional materials and intensive professional development are the tools that enable teachers to teach to the state standards.

Comprehensive literacy and mathematics frameworks provide a consistent set of strategies, knowledge, and skills across all classrooms. The frameworks are designed to ensure that all students get high quality instruction and content that will enable them to meet designated criteria and be successful in school. Research-driven, standards-based Literacy and Mathematics Frameworks guide teachers and principals toward effective instruction and curriculum implementation.

The effective use of enhanced instruction and extended learning time within and beyond the school day for literacy and mathematics at the entry grades means that students are more likely to meet grade level standards and therefore will be more likely to pass successfully to the next grade. The emphasis on competency in literacy and mathematics provides students with the academic preparation they need to be successful in all their studies, pass the High School Exit Exam, and compete for desirable post-secondary education and employment opportunities. Curriculum materials that integrate technology enable teachers and students to meet and exceed state standards.

Literacy: The emphasis is on ensuring that all elementary students are reading at grade level by the end of the third grade, and all secondary students get extra support in sixth and ninth grades. The district Literacy Framework is aligned to state frameworks and district standards. The

Literacy Framework provides a comprehensive, balanced approach to literacy that gives students the skills they need to be successful in school.

The elements of the framework that address reading include reading aloud, shared reading, guided reading, independent reading, phonemic awareness, and systematic, explicit phonics. The elements of the framework that address writing include modeled writing, shared writing, guided writing, and independent writing. Technology may be integrated into the literacy curriculum through its use to support reading, writing and research with computer applications and tools for accessing, organizing and presenting text and information.

The elements of the framework form the basis for instruction that provides all students with the research-based knowledge and skills used by the most fluent readers and writers. The elements build on one another in a logical progression that allows student to undertake increasingly difficult reading and writing tasks as the move up through the grades. The pedagogical approach uses the Readers' and Writers' Workshop models in which students work in collaborative groups to decode and discuss text and produce written work. Teachers help students use educational technology to produce and present their written materials. The outcome of using the Literacy Framework is that students can utilize their reading and writing abilities to access a wide range of texts for work, study, and enjoyment.

Mathematics: The focus on mathematics learning revolves around the expectation that all students learn algebra in order to be competitive for jobs in the expanding technology-based sector of the economy. In the past algebra has been a gatekeeper course that often was withheld from economically disadvantaged and traditionally underrepresented students and prevented them from being prepared for college and technical careers. LTUSD has made a commitment to removing the barriers to traditionally college-preparatory mathematics courses and helping all students achieve success at a high level of mathematics fluency and understanding. The district goals for mathematics include:

- All students are to learn and achieve at or above grade level in mathematics as reflected on multiple assessments. Prevention, intervention, and retention programs will support students so that they can reach this level of achievement.
- All students are to have consistent high quality learning opportunities in mathematics provided by qualified teachers, and grounded in standards-based frameworks, curriculum materials, and assessments.
- All teachers of mathematics are to be engaged in ongoing learning that supports instruction based on the district and state framework—including professional development, university-based content study, and conceptually based pedagogy programs.
- Administrators at each school are to learn to recognize effective mathematics and curriculum instruction and oversee and support its implementation.
- Technology is to be used to support learning and teaching in mathematics with teachers and students, who can use technology tools and applications to demonstrate concepts, collect and analyze data, acquire knowledge and skills, and access and organize information resources.

Computer applications and graphing calculators provide concrete visual images and representations for mathematical concepts and tools for data organization and analysis.

Science: Curriculum materials have been adopted in science that are aligned with the standards and that provide students a range of learning opportunities. A required course sequence has been adopted for all students in high school consisting of physics, chemistry, and biology. Technology is integrated in all grade levels as a tool for conducting research, collecting data, and forming analyses.

Social Studies: Teachers are encouraged to develop units of study around grade level standards that will allow their students to access the content and develop a deep understanding of history-social science. Content may be accessed and studies using educational technology tools, including, at grades 6-12, online ebooks, and the interent. The goals of the social studies curriculum include knowledge and cultural understanding, democratic understanding and civic values, and skills attainment and social participation. Five areas are emphasized in the social studies curriculum: historical comprehension; geographical and economic literacy; historical research, analysis and interpretations; historical issues – analysis and decision-making; and civics and government. Technology may be integrated into the social studies curriculum through its use to support reading, writing and research with computer applications and tools for accessing, organizing and presenting text and information.

3d. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan for using technology to improve teaching and learning by supporting the district curricular goals.

Our curriculum goal is to deliver technology rich instruction in all appropriate areas. All those who design, develop, and implement the district curriculum strive to infuse technology standards (ISTE NET\*S/NET\*S) into the instructional programs by:

Using technology as a learning tool.

Matching technology use objectives to the curriculum standards and benchmarks in appropriate subject areas.

Reinforcing student technology user skill standards.

Requiring the student to acquire hardware and software user skills.

Integrating the use of technology into the body of lesson plans.

Using teaching strategies that are based on current learning theory.

Requiring the student to solve authentic problems through project-based assignments with technology.

Providing an effective library/media technology resource program to all students and targeted groups.

Coordinating activities among teachers who are integrating technology into the curriculum.

Technology offers students possibilities for exploration, reinforcement, remediation, acceleration, creativity, and collaboration across the curriculum. Teachers are seeking and discovering innovative ways to meet the needs of an increasingly diverse student population by using differentiated instruction. GATE students, Special Education students, and EL students will benefit from increased access to technology with opportunities to:

Master curricular objectives.

Engage in a wide variety of multimedia and telecommunications projects.

Develop real-world computer skills that will enable them to be more productive when they exit high school.

Our adoption of ISTE NETS complements research provided by the Partnership for 21st Century Skills, whose findings confirm that in increasingly complex life and work environments of the 21st century, a "focus on creativity, critical thinking, communication and collaboration is essential to prepare students for the future" (the "4 Cs"). Technology integration into the curriculum is aligned to ISTE NETS Standards for Students and Teachers included in the chart below:

National Educational Technology Standards and Performance Indicators for Students (NETS*S)	National Educational Technology Standards and Performance Indicators for Teachers (NETS*T)_
1. Creativity and Innovation	1. Facilitate and Inspire Student Learning and Creativity
2. Communication and Collaboration	2. Design and Develop Digital-Age Learning Experiences and Assessments
3. Research and Information Fluency	3. Model Digital-Age Work and Learning
4. Critical Thinking, Problem Solving, and Decision Making	4. Promote and Model Digital Citizenship and Responsibility
5. Digital Citizenship	5. Engage in Professional Growth and Leadership
6. Technology Operations and Concepts	

Goal 3d.1: Provide all learners with access to engaging and empowering learning experiences both inside and outside of school, 24/7, that are geared to prepare them to be active, creative, knowledgeable, and ethical participants in a globally networked society.

**Objective 3d.1.1:** By June 2015, 80% of all LTUSD students will use technology to acquire mastery of the Common Core Standards and to participate in learning environments with an individual, group, or classroom with others at a state, national or international level. LTUSD will support, promote, and initiate curricular programs that prepare students to be active, creative, knowledgeable and ethical participants in a globally networked society.

#### **Benchmarks:**

**Year 1:** By June 2013, 40% of all LTUSD students will have used technology to assist in mastering the Common Core Standards and to participate in learning environments with an individual, group, or classroom with others at a state, national or international level.

**Year 2:** By June 2014, 60% of all LTUSD students will have used technology to assist in mastering the Common Core Standards and to participate in learning environments with an individual, group, or classroom with others at a state, national or international level.

**Year 3:** By June 2015, 80% of all LTUSD students will have used technology to assist in mastering the Common Core Standards and to participate in learning environments with an individual, group, or classroom with others at a state, national or international level.

Implementation Plan						
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument		
Continue providing LTUSD community with a variety of collaborative, interactive tools and programs designed to promote acquisition of Common Core State Standards, global learning, and digital citizenship.	July 2012- June 2015	Administrators, subject area coaches and specialists, technology coordinators	Teacher and student surveys, classroom observations	Teacher and student surveys, classroom observations		
Students will use Web 2. Tools, such as Skype and Twitter, to	July 2012- June 2015	Administrators, subject area coaches and specialists, technology	Teachers and student surveys, classroom observations	Teachers and student surveys, classroom observations		

Implementation Plan					
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument	
communicate and collaborate with students locally and globally.		coordinators			

Goal 3d.2: Provide all learners with continuous access to high-quality learning resources that are supported by technologies and design principles that evidence effectiveness in improving student learning outcomes.

**Objective 3d.2.1:** By June 2015, all students in grades K-12 will use high-quality learning resources and online resources to learn curricular concepts.

#### **Benchmarks:**

**Year 1:** By June 2013, LTUSD will provide high quality learning resources and online access to these resources for students in grades 3-8.

**Year 2:** By June 2014, LTUSD will provide high quality learning resources and online access to these resources for students in grades 2-12.

**Year 3:** By June 2015, LTUSD will provide high quality learning resources and online access to these resources for students in K-12.

Implementation Plan					
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument	
IXL, Ticket2Rread, Accelerated Reader, Reflect Math, Read 180	July 2013- June 2015	Administrators, technology integration specialists and district technology coordinators	Teacher and student surveys, classroom observations	Teacher and student surveys, classroom observations	

Goal 3d.3: Continue to develop, promote and support learning experiences that engage and motivate students and assist students in making connections to Science, Technology, Engineering and Math (STEM) learning.

**Objective 3d.3.1:** By June 2015, 70% of students will use STEM resources to engage in world/project based learning.

#### **Benchmarks:**

**Year 1:** By June 2013, 50% of students will use STEM resources to engage in world/project based learning.

**Year 2:** By June 2014, 60% of students will use STEM resources to engage in world/project based learning.

**Year 3:** By June 2015, 70% of students will use STEM resources to engage in world/project based learning.

	Implementation Plan						
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument			
Locate     resources for STEM learning     resources for Skype     resources for Twitter	July 2013- June 2015	Administrators, subject area specialists, technology integration specialists	Teacher and student surveys, classroom observations	Teacher and student surveys, classroom observations			
Students will Skype and Twitter locally, regionally and internationally	July 2013- June 2015	Administrators, subject area specialists, technology integration specialists	Teacher and student surveys, classroom observations	Teacher and student surveys, classroom observations			

# Goal 3d.4: Utilize blended and hybrid learning environments to extend and reinforce learning both within and beyond the school day.

**Objective 3d.4.1:** By 2015, 100% of students will have access to multiple online learning opportunities.

#### **Benchmarks:**

**Year 1:** By June of 2013, 80% of students will have access to multiple online learning opportunities.

**Year 2:** By June of 2014, 90% of students will have access to multiple online learning opportunities.

**Year 3:** By June of 2015, 100% of students will have access to multiple online learning opportunities.

Implementation Plan						
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument		
Students will use online programs, such as: IXL, Ticket2Read, and Web 2.0 technologies	July 2012- June 2015	Administrators, subject area specialists, technology integration specialists	Teacher and student surveys, classroom observations	Teacher and student surveys, classroom observations		

3e. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan detailing how and when students will acquire the technology skills and information literacy skills needed to succeed in the classroom and the workplace.

## Goal 3e.1: Students will acquire technological and information literacy skills – as defined by ISTE NETS\*S.

**Objective 3e.1.1:** By June 2015, 30% of primary students, 80% of intermediate students, and 90% of secondary students will be proficient or better with grade level NETS standards (or district equivalent). Students will learn the NETS skills during relevant curricular assignments.

#### **Benchmarks:**

**Year 1:** By the end of Grade 3, 30% of the primary students will demonstrate proficiency in meeting NETS K-2 Performance Indicators for Technology-Literate Students

**Year 2:** By the end of Grade 6, 80% of intermediate elementary students will demonstrate proficiency in meeting NETS 3-5 Performance Indicators for Technology-Literate Students

**Year 3:** By the end of Grade 8, 90% of secondary will demonstrate proficiency in meeting NETS 6-12 Performance Indicators for Technology-Literate Students

Implementation Plan					
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument	
Provide workshops on effective integration of	July 2012– June 2015	Classroom & computer teachers, curriculum	Administrators and district technology	Administrators and district technology	

	Implementation Plan						
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument			
21st century skills (e.g., "4C's"- creativity, critical thinking, communication and collaboration) into ISTE NETS-aligned, standards-based (Common Core State Standards) units of practice.		specialists & coaches, tech integration specialists	coordinators reviews lessons and outcomes.	coordinators reviews lessons and outcomes.			
Adapt and implement model lessons from 21st century resources (e.g., P21 Framework, Reinventing Project-Based Learning) scaffold skills for teaching and learning digital-age literacy.	July 2012 – June 2015	Classroom & computer teachers, curriculum specialists and tech integration specialists	Administrator and district technology coordinators review lessons and outcomes.	Evaluation Instrument(s): Collect student data by site. Site administrators and classroom teachers will document best practices and share with district technology coordinators. Evaluations will be through online student surveys and project- based student samples.			
Produce a media-rich digital story about a significant local event based on first-person interviews.	June 2012 – June 2015	Teachers, Administrators, District Technology Trainers	Administrators and District Technology Trainers	Online surveys and project based student samples			
Identify and investigate a global issue and generate possible solutions using digital tools and resources.	June 2012 – June 2015	Teachers, Administrators, District Technology Trainers	Administrators and District Technology Trainers	Online surveys and project based student samples			
Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support.	June 2012 – June 2015	Teachers, Administrators, District Technology Trainers	Administrators and District Technology Trainers	Online surveys and project based student samples			
Debate the effect of existing and emerging technologies on	June 2012 – June 2015	Teachers, Administrators, District Technology Trainers	Administrators and District Technology Trainers	Online surveys and project based student samples			

Implementation Plan					
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument	
individuals, society, and the global community.					

3f. List of goals and an implementation plan that describe how the district will address the appropriate and ethical use of information technology in the classroom so that students can distinguish lawful from unlawful uses of copyrighted works, including the following topics: the concept and purpose of both copyright and fair use

LTUSD has identified a wide range of instructional materials that address the appropriate and ethical use of information technology in the classroom, and will have links to information resources for parents, students and teachers on the district website. Teachers will receive informational materials about the appropriate and ethical use of information technology, curriculum materials on the subject for use in their classroom, and formal training in the appropriate and ethical use of information technology during the district's ongoing Educational Technology training sessions. Teachers will integrate instruction in the appropriate and ethical use of information technology into their classroom lessons and activities.

Goal 3.f.1.: Students will receive instruction in the appropriate and ethical use of information technology including the concept and purpose of both copyright and fair use, and the need to refrain from copyright infringement, plagiarism and illegal file sharing/downloading.

**Objective 3.f.1.1.:** By June 2015, 100% of district students will report via a student technology survey that they have received instruction regarding the appropriate and ethical use of information technology in the classroom so that students can distinguish lawful from unlawful uses of copyrighted works.

#### **Benchmarks:**

**Year 1:** 60% of district students will report via a student technology survey that they have received instruction regarding the appropriate and ethical use of information technology in the classroom so that students can distinguish lawful from unlawful uses of copyrighted works.

**Year 2:** 80% of district students will report via a student technology survey that they have received instruction regarding the appropriate and ethical use of information technology in the classroom so that students can distinguish lawful from unlawful uses of copyrighted works.



Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Develop informational materials on the appropriate and ethical use of information technology; integrate this information into the curriculum across the content areas.	Ongoing	District Technology Trainers	District Technology Trainers, Administrators	EdTech Profile, Observation by District Technology Coordinators, Parent Surveys
Distribute informational materials on the appropriate and ethical use of information technology to all teachers for use in the classroom. Provide more in- depth training in the appropriate and ethical use of information technology during regular Educational Technology training sessions.	Ongoing	Site administrators Teachers District technology trainers	District Technology Trainers, Teachers, Administrators	EdTech Profile, Observation by District Technology Coordinators, Parent Surveys
Implement instruction in the appropriate and ethical use of information technology in grades 3-12, including copyright and avoiding plagiarism.	Annually	Site administrators  Teachers  District technology trainers	District Technology Trainers, Teachers, Administrators	EdTech Profile, Observation by District Technology Coordinators, Parent Surveys

3g. List of goals and an implementation plan that describe how the district will address Internet safety, including how to protect online privacy and avoid online predators. (AB 307)

To protect students while they are online, LTUSD has implemented an Internet filter and monitoring system that is compliant with the Child Internet Protection Act (CIPA). LTUSD has identified a wide range of materials that address Internet safety, including the information provided by the federal government and the technology industry available at <a href="https://www.onguardonline.gov">www.onguardonline.gov</a>. This website provides a guide for parents to talk with their children about Internet safety. LTUSD will provide links to information resources on Internet safety for parents, students and teachers on the district website. Parents also receive information about Internet safety and LTUSD Acceptable Use policies in the *Facts for Parents* handbook distributed to parents each year. All parents of students under age 18 and students over age 18 are required to sign the —Netbook Agreement.

Teachers will receive informational materials about Internet safety, protecting online privacy and avoiding online predators, curriculum materials on the subject for use in their classroom, and formal training in Internet safety during the district's ongoing Educational Technology training sessions. Teachers will integrate instruction in Internet safety into their classroom lessons and activities.

Goal 3.g.1.: Students will receive instruction in Internet safety, and will use those skills to help protect their online privacy and avoid online predators.

**Objective 3.g.1.1.:** By June 2015, 100% of district students will report via a student technology survey that they have received instruction regarding Internet safety, protecting online privacy and avoiding online predators, cyber-bullying, and social network safety.

#### **Benchmarks:**

**Year 1:** 60% of district students will report via a student technology survey that they have received instruction regarding Internet safety, protecting online privacy and avoiding online predators, cyber-bullying and social network safety.

**Year 2:** 80% of district students will report via a student technology survey that they have received instruction regarding Internet safety, protecting online privacy and avoiding online predators, cyber-bullying and social network safety.

**Year 3:** 100% of district school students will report via a student technology survey that they have received instruction regarding Internet safety, protecting online privacy and avoiding online predators, cyber-bullying and social network safety.

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Develop informational materials on Internet safety; integrate this information into the grades 3-12 curriculum across the content areas. Post information for teachers, parents and students on the district website. Parents sign a STUDENT COMPUTER USE/INTERNET SAFETY & RESPONSIBILITY agreeing to the district's Internet Use and safety plan.		Ongoing	District technology coordinators, Teachers	EdTech Profile, Observation by District Technology Coordinators, Parent Surveys
Distribute informational materials on Internet safety to all teachers for use in the classroom. Provide more in-depth training on Internet safety during regular Educational Technology training sessions.		Ongoing	Site administrators  District technology coordinators	EdTech Profile, Observation by District Technology Coordinators
Implement instruction in Internet safety, protecting online privacy and avoiding online predators in grades 3-12.		Annually	Site administrators Classroom teachers District technology coordinators	EdTech Profile, Observation by District Technology Coordinators

## **3h.** Description of the district policy or practices that ensure equitable technology access for all students.

The NEXT STEP Program is designed to optimize student access and participation by integrating mobile computing, audio, visual and formative assessment technologies across the curriculum. The essential tools of the NEXT STEP classroom include the pairing of Interactive White Board (IWB) technology with student computers (Netbooks) to increase the ability to teach with technology and to optimize student access and engagement. These tools allow the teacher to configure the learning environment according to the context of the student-centric work at hand to meet state standards and learn 21st century skills as thinkers, creators, designers and builders.

The NEXT STEP Program was implemented in the district using a multi-phased grade level approach that will allow students beginning in grades 3 to access a consistent and equitable 21st century learning environment as they move from one grade to the next. The implementation plan in grades 9-12 used a department by department model that will provide all students access to technology rich learning environments.

Goal 3.h.1. Students will have access to existing technology resources that are suitable to their specific educational needs and address the specific content standards.

#### **Benchmarks:**

**Year 1:** 80% of district students will have access to additional technology resources that address content area standards and are specific to their educational needs. Student access to technology resources will be measured through annual school site reports and inventories, and data reported to the ED Tech Profile for both students and teachers.

**Year 2:** 90% of district students will have access to additional technology resources that address content area standards and are specific to their educational needs. Student access to technology resources will be measured through annual school site reports and inventories, and data reported to the ED Tech Profile for both students and teachers.

**Year 3:** 100% of district students will have access to additional technology resources that address content area standards and are specific to their educational needs. Student access to technology resources will be measured through annual school site reports and inventories, and data reported to the ED Tech Profile for both students and teachers.

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Evaluate existing and proposed technology resources for technical feasibility, support requirements, and cost and benefit; advise site administrators.		Ongoing as needed through June 2015	IT staff; District Technology Coordinators	EdTech Profile, Observation by District Technology Coordinators,
Select the optimal products and resources for schools, based on student achievement information and input from district instructional and technical support staff.		Ongoing as needed through June 2015	Site administrators, District Technology Coordinators, Lead Technology Teachers	EdTech Profile, Observation by District Technology Coordinators
Organize instructional schedules to facilitate student access		Ongoing as needed through June 2015	Site administrators, District Technology Coordinators, Lead Technology Teachers	EdTech Profile, Observation by District Technology Coordinators
Students utilize instructional technology resources specific to their educational needs to access rich content resources that are aligned with academic content standards. Resources may include Microsoft Live @ edu, Accelerated Reader, California Learns, IXL Math, Study Island and Explore Learning Reflex Math		Annually through June 2015	District Technology Coordinators	EdTech Profile, Observation by District Technology Coordinators

**Objective 3.h.1.2.** By June 2015, all district schools with English Language Learner (ELL) students will implement use of language arts software and online learning tools specifically to assist ELL students.

#### **Benchmarks:**

**Year 1:** 80% of district schools with ELL students will implement language arts software and online learning tools specifically to assist ELL students, as measured by schools' reported use of these tools, site inventories and data reported to the EdTechProfile each year.

**Year 2:** 90% of district schools with ELL students will implement language arts software and online learning tools specifically to assist ELL students, as measured by schools' reported use of these tools, site inventories and data reported to the EdTechProfile each year.

**Year 3:** 100% of district schools with ELL students will implement language arts software and online learning tools specifically to assist ELL students, as measured by schools'reported use of these tools, site inventories and data reported to the EdTechProfile each year.

	Implementation Plan			
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Evaluate existing and proposed instructional software and online learning tools designed to assist ELL students, for quality of resources and alignment to state and district content standards	Ongoing through June 2015	Contracted EL Coordinator and Resource teachers, site administrators, District Technology Coordinators	Contracted EL Coordinator and Resource teachers, site administrators, District Technology Coordinators	EdTech Profile, Observation by District Technology Coordinators
Evaluate existing and proposed instructional software and online learning tools designed to assist ELL students, for technical feasibility, support requirements, and cost and benefit; advise site administrators.	Ongoing through June 2015	District technical support staff, District technology coordinators	District technical support staff, District technology coordinators	EdTech Profile, Observation by District Technology Coordinators

Select the optimal products and resources designed to assist ELL students for schools, based on student achievement information and input from district instructional and technical support staff.	Ongoing as needed through June 2015	Site administrators, site teachers, District Technology Coordinators	Site administrators, District technology coordinators	EdTech Profile, Observation by District Technology Coordinators
Organize instructional schedules to facilitate student access to instructional resources.	Ongoing as needed through June 2015	Site administrators, with input from teachers and District Technology Coordinators	Site administrators, District technology coordinators	Observation by District Technology Coordinators
ELL students utilize language arts software and online learning tools (for example, Ticket to Read, Accelerated Reading, Read Naturally, other resources identified through the California Learning Resource Network) to enhance their learning of the English language.	Ongoing through June 2015	Site administrators, Teachers	Site administrators, District technology coordinators	EdTech Profile, Observation by District Technology Coordinators

**Objective 3.h.1.3** By June 2015, all district schools will implement use of hardware, software and online learning tools that are designed to meet the needs of Special Education Students, as specified in their Individual Education Plan (IEP).

#### **Benchmarks:**

**Year 1:** 80% of district schools will implement hardware, software and online learning tools that are designed to meet the needs of Special Education Students specified in their IEP, as measured by schools' reported use of these tools, site inventories and data reported to the Ed Tech Profile each year.

**Year 2:** 90% of district schools will implement hardware, software and online learning tools that are designed to meet the needs of Special Education Students specified in their IEP, as measured by schools' reported use of these tools, site inventories and data reported to the Ed Tech Profile each year.

**Year 3:** 100% of district schools will implement hardware, software and online learning tools that are designed to meet the needs of Special Education Students specified in their IEP, as measured by schools' reported use of these tools, site inventories and data reported to the Ed Tech Profile each year.

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Evaluate existing and proposed instructional software and online learning tools designed to meet the needs of Special Education students, as identified in their IEP, for quality of resources and alignment to state and district content standards.	Ongoing as needed through June 2015	Special Education administrator and teachers, site administrators, District Technology Coordinators	Special Education administrator and teachers, site administrators, District Technology Coordinators	Teacher and student Observation by District Technology Coordinators

Evaluate existing and proposed instructional software and online learning tools designed to meet the IEP-specified needs of Special Education students, for technical feasibility, support requirements, and cost and benefit; advise site administrators.	Ongoing as needed through June 2015	IT Staff, District Technical support staff	District technical support staff, District technology coordinators	Teacher and student Observation by District Technology Coordinators
Select the optimal products and resources designed to help meet the identified needs of Special Education students, based on student achievement information and input from district instructional and technical support staff.	Ongoing as needed through June 2015	Special Education administrator and teachers, site administrators, District Technology Coordinators	Special Education administrator and teachers, site administrators, District Technology Coordinators	Teacher and student Observation by District Technology Coordinators
Organize instructional schedules to facilitate student access to instructional resources.	Ongoing as needed through June 2015	Site administrators, with input from Special Education Teachers	Special Education administrator and teachers, site administrators, District Technology Coordinators	Observation by District Technology Coordinators

Special Education students will use the hardware, software and online learning tools identified in their IEP to enhance their learning. They will engage in a variety to technology-enhanced learning activities, such as using the Internet to research topics, using tech skills to publish, present and share information, use simulations to enhance learning skills, etc.	Ongoing as needed through June 2015	Site Special Education Teachers, site administrators	Special Education administrator, site administrators	Observation by District Technology Coordinators
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- 3i. Continue to provide all LTUSD staff with continued professional development for technology tools pertinent to student achievement (i.e., data collection, analysis, and reporting).
- Goal 1: The District will administer formative assessments three times a year for all students to monitor learning of Essential Standards. Assessments will be administered using Online Assessment and Review System (OARS) Blueprint Online Assessment, Standards Progress Assessment (SPA). Students will take the assessment using netbooks in grades 3-8.
- Goal 2: All HMR Theme tests in Grades 1-5 will be reviewed by teachers with recommendations to Principals, in order to reduce or limit assessment areas administered.
- Goal 3: Teachers in grades 3-8 will receive 1:1 Netbook training throughout the year which will include Blueprint online testing procedures and use of OARS Reports to disaggregate results by standards.
- Goal 4: Continuous formative assessment (SPA) drives RTI process by allowing teachers to measure what students have learned, haven't learned and which standards need to be taught.

**Objective 3.i.1.** By June 2015, all LTUSD staff will have access to professional development (either face-to-face or online) on programs to improve student achievement.

#### **Benchmarks:**

**Year 1:** By June of 2013, 80% of the staff will receive staff development in the use of the online SIS Aeries Browser Interface and in OARS on how to collect formative and summative assessment information to inform instruction in reading, writing, and math in all grade levels and with all student groups.

**Year 2:** By June of 2014, 90% of the staff will receive staff development in the use of the online SIS Aeries Browser Interface and OARS and how to collect formative and summative assessment information to inform instruction in reading, writing, and math in all grade levels and with all student groups.

**Year 3**: By June of 2015, 100% of the staff will receive staff development in the use of the online SIS Aeries Browser Interface and OARS and how to collect formative and summative assessment information to inform instruction in reading, writing, and math in all grade levels and with all student groups.

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & Evaluation	Evaluation Instrument
Continue to provide appropriate training to staff on applicable programs and tools.	July 2012- June 2015	Technology Services, District Technology Trainers	Online staff surveys, requests and feedback from sites	Online staff surveys

3j. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan to use technology to improve two-way communication between home and school.

Goal 3j: Provide professional development on current and upcoming student-achievement and communication tools and programs (i.e.: Teacherweb, LTUSD Web Portal).

**Objective 3j.1**: By 2015, all LTUSD staff and parents will be able to support student learning by having 24/7 access to pertinent student data.

#### **Benchmarks:**

- **Year 1**: By June 2015, Technology Services will have completed initial development and roll out of Teacherweb and LTUSD Web Portal.
- **Year 2:** Technology Services will continue to review effectiveness of Teacherweb and LTUSD Web Portal and implement any changes needed.
- **Year 3:** Technology Services will continue to review effectiveness of Teacherweb and LTUSD Web Portal and implement any changes needed. All LTUSD staff and parents will be able to support student learning by having 24/7 access to pertinent student data.

## Goal 3j.2: Lake Tahoe Unified School District will improve two-way communication between home and school.

**Objective 3j.2.1:** 80 % of kindergarten through twelfth-grade teachers will have a classroom web site or online course management system with curricular resources and information to support student learning and parent communication.

#### **Benchmarks:**

- **Year 1**: By June 2013, 60% of kindergarten through twelfth-grade teachers will have a classroom web site or online course with curricular resources and information to support student learning and parent communication.
- **Year 2:** By June 2014, 70% of kindergarten through twelfth-grade teachers will have a classroom web site or online course with curricular resources and information to support student learning and parent communication.
- **Year 3:** By June 2015, 80% of kindergarten through twelfth-grade teachers will have a classroom web site or online course with curricular resources and information to support student learning and parent communication.

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & & Evaluation	Evaluation Instrument
District Technology Coordinators will provide "just-in-time" support for teachers as they use tools to communicate with other teachers. Instructional handouts and video tutorials on	Year 1	Director of Information Services and Technology	District web statistics Surveys EdTech Profile	Surveys, EdTech Profile

Implementation Plan				
Activity	Timeline	Person(s) Responsible	Monitoring & & Evaluation	Evaluation Instrument
utilizing teachers' web space on the District web server. Classes, handouts, and video tutorials will be made available to teachers.  Teachers will include homework assignments, reminders and an email address for parents to contact the teacher to foster two way communications.	Year 1-3	Teachers, administrators, district technology trainers	District technology trainers, administrators	Surveys, EdTech Profile
District Technology Coordinator will provide parents and staff with training via a parent night to allow access 24/7 to student data.	Year 1-3	District technology trainers	District technology trainers, administrators	Parent survey at back to school night, Teacher surveys

3k. Describe the process that will be used to monitor the Curricular Component (Section 3d-3j) goals, objectives, benchmarks and planned implementation activities including roles and responsibilities.

The implementation of district curriculum goals for technology access, professional development, and integration will be overseen by the LTUSD Superintendent and the District Technology Coordinators. Collecting and evaluating relevant data regarding the scope, sequence, and outcomes of the above goals will be conducted annually by the Technology Coordinators.

## 4. Professional Development

# 4a. Summary of teachers' and administrators' current technology skills and needs for professional development.

LTUSD is committed to providing teachers with a vision for 21st century teaching and learning, along with the professional development to introduce them to and build comfort levels with emerging technologies and promising practices. Teacher technology skills and needs were assessed through the Ed Tech Profile, administrator and staff input, and also observation by the District's two Technology Coordinators/Trainers. Our workshops have evolved from basic technology skills, such as word processing, spreadsheets, and slideshows, to include a range of Web 2.0 and media literacy tools. Our current professional development increasingly incorporate ISTE NETS and reflect the growing bank of research in support of integration of the "4 Cs" (*creativity, critical thinking, communication and collaboration*) and digital and media literacy into the K-12 curriculum. Central to our research has been the U.S. Department of Education's 2010 technology plan, "Transforming American Education: Learning Powered by Technology," which notes: "Whether the domain is English language arts, mathematics, sciences, social studies, history, art of music, 21st century competencies and expertise such as crucial thinking, complex problem solving, collaborations, and multimedia communication should be woven into all content areas."

Another new direction for professional development offerings is the need to align lessons and technology integration with California's newly adopted Common Core State Standards. As the Common Core State Standards Initiative (2010) points out, "To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, report on, and create a high volume and extensive range of print and non-print texts in media forms old and new. The need to research and to consume and produce media is embedded into every element of today's curriculum."

In order to deal with rapid changes in technology and technology-related policies, our learning models will need to be evaluated and updated on a regular basis. Through regular input throughout our district, LTUSD will continue to align technology trainings and integration with state-approved content and performance standards, adopted textbooks, curricula, and programs. Additionally, Technology Services will continue to expand online learning opportunities for teachers and staff, as well as best practices for teaching online courses.

4b. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan for providing professional development opportunities based on your district needs assessment data (4a) and the Curriculum Component objectives (sections 3d through 3j) of the plan.

Goal 4b.1: Provide teachers and administrators with the professional development needed to acquire the same general technology skills, technology integration skills, and information literacy skills required of students in alignment with Common Core State Standards and ISTE NETS.

**Objective 4b.1:** By June 2015, 90% of teachers will learn ISTE NETS standards and Common Core Standards in order to assist student instruction.

#### **Benchmarks:**

**Year 1:** By 2013, 70% of teachers will learn ISTE NETS standards and Common Core Standards in order to assist student instruction.

**Year 2:** By 2014, 80% of teachers will learn ISTE NETS standards and Common Core Standards in order to assist student instruction.

**Year 3:** By 2015, 90% of teachers will learn ISTE NETS standards and Common Core Standards in order to assist student instruction.

Activities	Timeline	Person(s) Responsible	Monitoring & Evaluation
Administer surveys to assess ways teachers integrate technology into the core curriculum to increase student achievement.	July 2012– June 2015	Site and district administrators, curriculum specialists & coaches, tech integration specialists	Classroom observations, online surveys, student projects
Document and record model lessons that exemplify best practices.	July 2012– June 2015	Technology Services	Video documentation
Implement instruction in the appropriate and ethical use of information technology, including copyright and avoiding plagiarism. Instruction on	July 2012– June 2015	Technology Coordinators	Classroom observations, online surveys

Teacher Web and Web		
Portal		

Goal 4b.2: Provide professional development to enable teachers to access current data, resources, and expertise that will benefit all LTUSD students.

**Objective 4b.2:** By 2015, 100% of LTUSD teachers will receive professional development to understand and interpret student achievement data to help drive decision making.

#### **Benchmarks:**

**Year 1:** By 2013, 80% of LTUSD K-12 teachers and administrators will receive professional development on the effective use of relevant components to help drive decision making (depending on job assignments).

**Year 2:** By 2014, 90% of LTUSD K-12 teachers and administrators will receive professional development on the effective use of relevant components to help drive decision making.

**Year 3:** Benchmark: By 2015, 100% of LTUSD K-12 teachers and administrators will receive professional development on the effective use of relevant components to help drive decision making.

Implementation Plan					
Activities	Timeline	Person(s) Responsible	Monitoring & Evaluation		
Provide workshops and online training material.	July 2012– June 2015	Technology Services	Online surveys, Technology Services'		

Goal 4b.3: Continue to provide professional development on Internet safety and digital citizenship to meet requirements of AB 307 and more current legislation.

**Objective: 4b.3:** By June 2015, all teachers and administrators will be prepared to model and teach applicable issues and components of digital citizenship, including Internet safety, awareness of and dangers of cyber bullying, and how to maintain online privacy and a positive digital footprint.

#### **Benchmarks:**

**Years 1-3:** From July of 2012-2015, 100% of LTUSD teachers and administrators will continue to receive training on the appropriate and ethical use of information technology.

Implementation Plan					
Activities	Timeline	Person(s) Responsible	Monitoring & Evaluation		
Provide workshops on digital citizenship issues, resources, and tools.	July 2012– June 2015	District technology coordinators	Classroom observations, online surveys, student projects		
Document and record classroom examples of best practices.	July 2012– June 2015	District technology coordinators	Video documentation		

4c. Describe the process that will be used to monitor the Professional Development (Section 4b) goals, objectives, benchmarks, and planned activities including roles and responsibilities.

The implementation of district goals for professional development and curriculum integration within this plan will be overseen by the LTUSD Superintendent and the District Technology Coordinators. Collecting and evaluating relevant data regarding the scope, sequence, and outcomes of the above goals will be conducted annually by the District Technology Coordinators.

### 5. Infrastructure, Hardware, Technical Support, and Software

5a. Describe the existing hardware, Internet access, electronic learning resources, and technical support already in the district that will be used to support the Curriculum and Professional Development Components of the plan.

#### **Existing Hardware:**

Currently LTUSD has approximately 3,500 netbooks, desktop and laptop computers and 30 servers. The overall student to computer ratio for student-accessible computers connected to the network is 4:1 for grades K-2 and 1:1 in grades 3-12. The desktop computers are currently both Windows and Macintosh. In September 2010, a plan was introduced to "refresh" all computers running obsolete operating systems to at least Windows XP or Windows 7. All classrooms have at least one workstation that meets district minimum standards. The middle school classroom configuration varies with the instructional use of the classrooms. As funding becomes available, the goal is to continue to "refresh" computers not meeting the minimum standard and to add new computers to lower the student to computer ratio. Similar to the middle school configurations, the high school classroom configurations vary with the instructional use of the classrooms. The district employs Windows 2003 and 2008 servers for various applications including Microsoft Exchange, DNS/WINS, file/print services, SQL server, Proxy, Firewall, Internet/Intranet, Anti-Virus and LANDesk. Active Directory log-on services are provided by Windows 2008 domain controller servers.

Voice services consist of full function Nortel systems at all sites. Voicemail has been implemented at all of sites within the district. These are systems that are integrated with the site's telephone system.

Cell phones are used by administrators and technical and support staff to provide communications while away from their respective sites. This includes both voice-only phones and phones with data access capability to provide connectivity to the district's email services. The ultimate goal is to provide for safety and enhanced communications between administrators, staff, teachers, parents, students and the community.

### **Existing Internet Access:**

All district sites have a high-speed (10mbps, 100mbps or 1Gbps) Ethernet jack for every administrative office location and multiple Ethernet jacks for every classroom. The site's LAN infrastructure connects to the district WAN through a head-end router or routing switch. The WAN links all terminate at the District Office. Currently, all secondary sites are on dark fiber running at 1Gbps. The elementary sites connect via AT&T Metro Ethernet at 10Mbps. The District Office connects to the Sacramento County Office of Education via a dark fiber connection at 1Gbps, providing access to the Internet via the K12HSN backbone network.

### **Existing Electronic Learning Resources:**

At elementary sites in grade K-2 classrooms there is at least one workstation that meets district minimum standards. All district computers desktops are imaged with Microsoft Office prior to deployment. Students in grades 3-12 are issued one Netbook each that runs Windows 7. Each student has a Live@ EDU account which includes email, 25 Gigs of online storage and online Windows Office. All sites use the following programs: BrainPop, California Learns, Teacher Web and OARS. Elementary and middle school also use the following programs: Accelerated Reader, Read Naturally, Read 180, IXL, Spelling City, Writing Roadmap, Ticket to Read and Reflex Math. The High School uses Study Island, Odyssey Ware and Accelerated Math.

#### **Existing Technical Support:**

Technical support for LTUSD is provided by Technology Services. The department has two staff members who are responsible for day to day administration and maintenance of all District servers, server based applications, and Active Directory network accounts.

Technology integration and the training of teachers and students on the use of technology in the classroom are done by two teachers on special assignment. These two teachers work with classroom teachers and students on the implementation and training of the district's Netbook program.

5b. Describe the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support needed by the district's teachers, students, and administrators to support the activities in the Curriculum and Professional Development Components of the plan.

#### **Hardware Needed:**

Lake Tahoe USD needs to refresh some of the network equipment to continue to provide the performance and capabilities needed to support the evolving and continued growth of technologies. Some of the existing hardware is 8 to 10 years old including SmartBoards and printers and are at their end-of-life with little or no vendor support.

With the convergence of voice, alarms, clocks and other services onto the network, the goal is to provide a robust architecture that supports current and emerging communications standards.

#### **Electronic Learning Resources Needed:**

The district is incorporating the latest in multimedia technology. School sites are using various pieces of equipment and software, such as document cameras, LCD projectors, interactive white boards, streaming video, video conferencing equipment and online meeting applications. Subscriptions to online Web 2.0 tools, whenever possible, are made for multi-year discounted rates. There are usually at least a couple a year that have to be renewed.

#### **Networking and Telecommunications Infrastructure Needed:**

LTUSD has deployed wireless access at all school sites to provide secured network access to authorized netbooks, laptops and other wireless devices.

The district is working to augment or upgrade existing telephone technologies to be more network-aware and also working on a foundation to support and possibly deploy Voice-over-IP (VoIP). The district has been involved in and implemented various security efforts such as networked Closed Circuit TV surveillance and other network and physical security initiatives.

#### **Physical Plant Modifications Needed:**

In our effort to provide leading-edge technology, we must also provide the proper environment for this technology. With more workstations being deployed and the increased processing power of the servers, heat load and power consumption become significant factors in the design of the physical plant. More resources are being directed toward HVAC and power management, including emergency backup power. We are pursuing the design and implementation of environmental systems where technology is installed. Additionally, green technologies will be deployed to manage power consumption.

#### **Technical Support Needed:**

As the schools bring in more and more technology and rely on it more and more for instruction, more technical support will be needed to meet the demands of faster response time and the sheer volume of equipment growth. Through the budget development process, we hope to move to a formula based process for hiring new FTE based on application development/support. We anticipate needing either to add new technical support positions in the next three years to meet the goals and support needs of the district or change how we provide support, or what systems and areas we do support.

5c. List of clear annual benchmarks and a timeline for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components as identified in Section 5b.

Goal 5c: By June of 2015 student in grades 3-12 will have a student to netbook ratio of 1:1. Grades K-2 will have a student to Netbook ratio of 2:1. SmartBoards, printers, document cameras and LCD projectors are in use by all teachers. Network access is available for all staff and student authorized use.

Year 1 Benchmarks:				
<b>Recommended Actions/Activities</b>	Timeline	Person(s) Responsible		
Purchase and rollout netbooks to every student in grades 3-12	By June 2013	Technology Coordinators		
Replace broken and obsolete SmartBoards, printers, document cameras and LCD projectors	By June 2013	Site Administrator, Technology Coordinator		
Purchase of multi-year discounted online software subscriptions to support grade level curriculum	By June 2013	IT Staff, Technology Coordinators		
Update Network needs to support consistent network access for all staff and students, start implementation of VoIP at select sites.	By June 2013	IT Staff		

Year 2 Benchmarks:			
<b>Recommended Actions/Activities</b>	Timeline	Person(s) Responsible	
As new netbooks are purchased every 22 months, move older netbooks down to grades K-2 by issuing a class set of at least 10 netbooks to grades K-2	By June 2014	Technology Coordinators	

Year 2 Benchmarks:				
<b>Recommended Actions/Activities</b>	Timeline	Person(s) Responsible		
Replace broken and obsolete SmartBoards, printers, document cameras and LCD projectors	By June 2014	Site Administrator, Technology Coordinator		
Purchase of multi-year discounted online software subscriptions to support grade level curriculum	By June 2014	IT Staff, Technology Coordinators		
Update Network needs to support consistent network access for all staff and students, continue implementation of VoIP at select sites.	By June 2014	IT Staff		

Year 3 Benchmarks:			
Recommended Actions/Activities	Timeline	Person(s) Responsible	
Continue to rollout netbooks to every student in grades 3-12	By June 2015	Technology Coordinators	
Replace broken and obsolete SmartBoards, printers, document cameras and LCD projectors	By June 2015	Site Administrator, Technology Coordinator	
Purchase of multi-year discounted online software subscriptions to support grade level curriculum	By June 2015	IT Staff, Technology Coordinators	
Update Network needs to support consistent network access for all staff and students, finalize implementation of VoIP at all sites. Install new telephone system	By June 2015	IT Staff	

# 5d. Describe the process that will be used to monitor Section 5b and the annual benchmarks and timeline of activities including roles and responsibilities.

The implementation of district goals for infrastructure, hardware, technical support, and software within this plan will be overseen by LTUSD Superintendent, Technology Coordinators and the Director of Technology Services. Collecting and evaluating relevant data regarding the scope, sequence, and outcomes of the above goals will be conducted annually by all units of the Technology Services department. Operational funds will be used as available to replace aging equipment as necessary.

### 6. Funding and Budget

### 6a. List of established and potential funding sources.

### **Established Funding Sources:**

**ERATE** 

**NCLB** Grants

Title I Staff Development

Title II (Competitive and Formula)

School site funds (restricted and unrestricted)

District Measure G Bond

### **Potential Funding Sources:**

In order to alleviate expenditures from district categorical and general funds, LTUSD will actively pursue grant funding.

### 6b. Estimate annual implementation costs for the term of the plan.

Item Description	Year 1 12/13	Year 2 13/14	Year 3 14/15	Funding Source Including E-Rate	
1000-1999 Certificated Sa	laries				
Staff Development	\$155,045	\$155,045	\$155,045	EETT Grant, Categorical Staff Development funding	
<b>4000-4999</b> Materials and	Supplies				
Web 2.0 tools/subscriptions	\$60,504	\$60,504	\$60,504	Categorical Funding	
5000-5999 Other Services	5000-5999 Other Services and Operating Expenses				
Netbook Cell Service with AT&T	\$189,000	\$189,000	\$189,000	General Fund, E-Rate	
6000-6999 Equipment					
Upgrade network equipment at each District Location (3G & Wifi), and VOIP	\$45,000	\$60,000	\$45,000	General Fund, K-12 Voucher	
SmartBoards & LCD Projectors	\$60,000	\$104,000	\$60,000	Measure G Bond	
Printers	\$10,000	\$15,000	\$10,000	Measure G Bond	
Student Netbooks	\$80,000	\$25,000	\$65,000	Measure G Bond	
Totals:	\$599,549	\$608,549	\$579,549		

#### 6c. Describe the district's replacement policy for obsolete equipment.

The district's annual budget process determines the level of general fund and categorical fund support that will be available for technology. The budget process begins each year with the Governor's proposed budget in January and May revision. Measure G funding is added to the budget forecast. The district adopts its annual budget in June of each year, and revises that budget as needed when the state legislature passes the state budget. Grants occur on their own timeline, independent of the district's regular budget process. If additional restricted funding for technology becomes available, the district may change its priorities for less-restricted funding accordingly.

The district has established a policy to refresh obsolete equipment at least every 5 years.

The District Technology Coordinators will have the overall responsibility for monitoring the technology budget and making recommendations to the Superintendent and Board of Education concerning technology expenditures. The following groups will participate in the feedback loop used to monitor progress and update funding:

- The District Technology Coordinators will review and update the technology budget and funding plan on a quarterly basis, and present updated information to the Superintendent.
- Site Principals will evaluate their needs and available resources at their school sites, and reallocate resources as necessary. The District Technology Coordinators will collect information about these reallocations and summarize it in the quarterly reports provided to the Committee.
- School Site Councils will work with site principals to allocate site categorical funds to meet their technology needs.

# 6d. Describe the process that will be used to monitor Ed Tech funding, implementation costs and new funding opportunities and to adjust budgets as necessary.

The LTUSD Technology Plan budget will be reviewed annually by the Superintendent, Fiscal Services and Technology Services. Upon review, funding for professional learning and technology needs will be assessed and revised according to funding availability. An annual summary report will be compiled and distributed to stakeholders via the local school board meetings and the district website. Stakeholders' input will be sought through board meetings, Technology Advisory Committees, public information resources, and through the district's website. The plan and budget priorities will be revised based on stakeholders' input.

### 7. Monitoring and Evaluation

# 7a. Describe the process for evaluating the plan's overall progress and impact on teaching and learning.

- Integrating technology into all aspects of curriculum and teaching provides new avenues
  for introducing, reinforcing, and extending student learning. Our plan focuses
  specifically on evaluating and implementing online software programs in the content
  area, particularly in Language Arts and Mathematics. On an on-going basis,
  Technology Services will work with Technology Coordinators to evaluate the impact of
  current technologies on student performance, as measured by the CST's and CAHSEE,
  and to seek direction on how technology can support the district in meeting academic
  goals.
- In order to provide and maintain an infrastructure that allows students, teachers, and staff to become proficient users of technology, it is essential that the milestones laid out in Part 3 of this plan are completed according to the timeline. Technology Services, Facilities, and school sites will monitor the number of computers meeting our minimum standards as well as our student-to-computer ratios.
- Technology Services will conduct periodic reviews of the implementation plan, including the overall progress and impact on teaching and learning.
- Funding/Budget Technology Services will assume a lead role in disseminating technology funding and budget information to all district stakeholders. Information will be provided in the context of the goals and objectives designated funds support. Through regular monitoring of new funding sources, such as state, federal, and private grants, LTUSD will work with the Sacramento County Office of Education and the California Department of Education to ensure that it avails itself of all possible funding sources.

#### 7b. Schedule for evaluating the effect of plan implementation.

The District Technology Coordinators will meet annually and review the technology plan as a whole, per the components listed above, for necessary modifications or unforeseen needs. Bimonthly reports on specific areas of specific components will be provided to the appropriate bodies as the plan progresses.

### 7c. Describe the process and frequency of communicating evaluation results to tech plan stakeholders.

The District Technology Coordinators will communicate progress and recommendations for change to the stakeholders for consideration and feedback. Opportunities for the stakeholders to give input and voice concerns will be provided via the district website. On-going evaluation will continue throughout the duration of the plan.

### 8. Collaborative Strategies with Adult Literacy Providers

Our data indicates that the level of parental education varies widely from school to school. Using the elementary data as representative of the district as a whole, we can see from the chart below that percentage of parents without a high school diploma ranges from 34% at Bijou to 0% at the Lake Tahoe Environmental Science Magnet School. In contrast, the percentage of parents with graduate school education ranges from 33% at Lake Tahoe Environmental Science Magnet School to 1% at Bijou.

Percentages	LTESMS	Bijou	Sierra House	Tahoe Valley
not HS grad	0%	34%	20%	15%
HS grad	18%	42%	34%	42%
AA Degree	23%	9%	14%	17%
BS, BA, MA, MS	33%	6%	17%	13%
Grad School	17%	1%	9%	6%
decline/unknown	8%	7%	6%	5%

LTUSD serves a diverse community with adult literacy needs. There are 19 different languages spoken by parents of our students. Currently there are 2 adult literacy programs in South Lake Tahoe. The Family Resource Center, in collaboration with the school district, Lake Tahoe Community College, and the El Dorado County Library provide adult literacy programs. LTUSD works closely with the adult literacy program at the Family Resource Center, which is located on the campus of Bijou Community School. This collaboration has proven to be very successful for the adults in the community who need literacy skills training.

Goal: Increase the parent participation in their child's education through the implementation of parent training in the areas of language arts and mathematics.

Benchmark 1: Collaborate with local Adult Literacy Providers in our community					
Benchmark 2: Audit existing Adult Literacy Programs and begin collaboration					
Benchmark 3: Collaborate as appropriate to share resources					
Activity	Timeline	Person(s) responsible	Monitoring Evaluation	and	

Contact all adult literacy providers in the community to begin collaboration	September 2012 – June 2015	Contracted ELL	Superintendent will monitor progress and evaluate success
Hold meeting of all adult literacy providers and LTUSD to list existing programs, current needs and assign people to solutions	September 2012 – June 2015	Sue O'Connor	Superintendent
	September 2012 – 2015	Sue O'Connor	Superintendent

### Research in Adult Literacy -

Technology Briefs for No Child Left Behind Planners, Northeast & the Islands Regional Technology in Education Consortium, <a href="http://www.neirtec.org">http://www.neirtec.org</a>

- 1. The tools to increase literacy in the U.S. that can be the foundation of an effective overall approach include: cultures of lifelong learning; early childhood education; measures to improve the quality of education and reduce the inequality in the outcomes of schooling; access to adult education for all citizens; literacy rich environments at work, at home and in the community; workplace literacy programs and access to information and communication technologies. (P. 50)
- 2. One of the best sources of rich examples of adult learning programs that have integrated technology is the *Captured Wisdom on Adult Literacy*, produced by NC RTEC and its partner National Center for Adult Literacy. (P. 51)
- 3. The principals of adult learning are identified by Sites (1998) based on the work of Dewey, Lindeman and Knowles. Ginsburg (1998) has identified and summarized four basic approaches to integrating technology into adult learning and instruction. These are both discussed in *Meeting them Where They Are: Promising Practices for Educating Adults at CTCs.* http://www.americaconnects.net/research/AdultEdPP.asp

### 9. Effective, Researched-Based Methods and Strategies

## 9a. Summarize the relevant research and describe how it supports the plan's curricular and professional development goals.

LTUSD's Technology Coordinators continually assess and evaluate programs and test data with the explicit goal of raising student achievement and closing the achievement gap. Decision making processes at all levels are informed by past and current student data.

In addition to yearly measures such as test scores, the California Academic Performance Index (API), and the Adequate Yearly Progress (AYP), instructional goals for LTUSD have also been guided by current research on the role of technology in K-12 programs and curricula. In recognition that our plan must respond to the needs of a rapidly changing society and workforce and, therefore, support creativity, critical thinking, communication and collaboration, this

Technology Plan draws on research from the Partnership for 21st Century Skills and the U.S. Department of Education's Transforming American Education: Learning Powered by Technology. These resources both offer a perspective on 21st century skills needed for today's students and areas of professional development recommended for the teachers.

As a district we embrace the possibilities for teaching and learning afforded by emerging, highly interactive technologies, but we are also well aware of the need to introduce teachers and students to the requirements of current legislation. For safety and privacy issues, we have drawn mainly from the research available from the Center for Responsible Internet Use, the National Center for Missing and Exploited Children, and the Cyber bullying Research Center. Our Copyright and Fair Use workshops are based on guidelines provided by Center for Social Media's *Code of Best Practices in Fair Use for Media Literacy Education*.

Annotated Bibliography

# Boss, S., & Krauss, J. (2007). Reinventing Project-Based Learning: Your Field Guide to Real-World Projects in the Digital Age. Eugene, ISTE (International Society for Technology in Education)

Authors provide strategies, resources, and examples to help teachers and administrators transform learning into a more active, student-driven experience, using technology tools for inquiry, collaboration, and connection to the world beyond the classroom.

"Copyright." Copyright and Fair Use. (2008). US Copyright Office. 4 Sept 2008

http://www.copyright.gov

Site introduces copyright basics, copyright laws, fact sheets, and FAQs, along with a link to Taking the Mystery out of Copyright -and a tour for students and teachers. The site also provides guidelines for Fair Use.

## Geisert, P., & Futrell, M. (2000). Teachers, computers, and curriculum: Microcomputers in the Classroom. Needham Heights, MA., Allyn and Bacon.

The authors' emphasis is on the classroom and curricular integration, not on computer technology. Its curriculum-based approach to using microcomputers addresses the needs and concerns of pre-service and in-service teachers of different experiential backgrounds, from computer novice through long-time proficient uses. The authors examine how schools are putting technology to use with K12 youngsters "toward genuine fusion of instructional processes and computer use in diverse content areas and grade levels."

### Hobbs, Renee. Copyright Clarity: How Fair Use Supports Digital Learning. (2010). Corwin Press.

Guide clarifies principles for applying copyright law to 21st-century education, discusses what is permissible in the classroom, and explores the fair use of digital materials.

### McKenzie, J., (2000). Beyond technology: Questioning, research, and the information literate school. Bellingham, WA: FNO Press.

The author shares his concerns that once schools install networks, that many discover they've paid too little attention to learning goals and a purpose that might mobilize teachers to embrace the new technologies with enthusiasm. McKenzie describes how questioning, research and information literacy can become driving forces so that even skeptics and late adopters acknowledge the value of the venture.

### Partnership for 21st Century Skills. http://www.p21.org/

Research explains the elements that are the critical systems necessary to ensure student mastery of 21st century skills, with a focus on assessment. 21st century standards, assessments, curriculum, instruction, professional development and learning environments must be aligned to produce a support system that produces 21st century outcomes for today's student.

# Roschell, J., Pea, R., Hoadley, C., Gordin, D., & Means, B. Changing how and what children learn in school with computer-based technologies. The Future of Children: Children and Computer Technology [Online] Available: www.fututreofchildren.org

Participation in groups, (3) frequent interaction and feedback, and (4) connections to real-world contexts.

## Trilling, B. & Fadel, C. (2009). 21st Century Skills: Learning for Life in Our Times, MA., Jossey-Bass.

Authors introduce a framework for 21st Century learning that maps out the skills needed to survive and thrive in a complex and connected world. 21st Century content includes the basic core subjects of reading, writing, and arithmetic-but also emphasizes global awareness, financial/economic literacy, and health issues.

# U.S. Department of Education, Office of Educational Technology. (2010). Transforming American education:Learning powered by technology. Retrieved from <a href="http://www.ed.gov/technology/netp-2010">http://www.ed.gov/technology/netp-2010</a>

Plan provides a blueprint for transforming American Education. The Plan focuses specifically on supporting teachers and students using technologies common today.

# Willard, Nancy. "Recent Reports and Articles." Center for Responsible Internet Use. 4 Sept 2008

HTTP://WWW.CYBERBULLYING.ORG/DOCUMENTS/

Director Nancy Willard provides research and outreach services to address issues of the safe and responsible use of the Internet. Articles are pertinent to parents, educators, policymakers, and others regarding effective strategies to assist young people in gaining the knowledge, skills, motivation, and self-control to sue the Internet and other information technologies in a safe and responsible manner.

9b. Describe the district's plans to use technology to extend or supplement the district's curriculum with rigorous academic courses and curricula, including distance-learning technologies.

LTUSD has a firm commitment to resist buying into the latest tools and strategies unless we can justify through professional wisdom and/or empirical evidence that LTUSD students and staff will benefit from the investment. Under the guidance of the Sacramento County Office of Education, the California Department of Education and the U.S. Department of Education, we intend to monitor and document how our technology programs are facilitating student learning and achievement, teaching, and technology management. Technology strategies and methods are by their very nature dynamic works in progress and must be periodically revised and adapted to changing technologies and changing educational environments.

The district continues to examine ways to deliver curriculum and professional development, both face-to-face and online, using new, innovative, technology-based tools. The Technology Plan integrates the development of innovative strategies for using technology including the use of free or low cost online resources cloud computing, Open Source and Web 2.0 tools and resources for students, teachers, and administrators, such as those offered through the California K12 High Speed Network. The district will continue to work with CTAP Region 3 and the El Dorado County Office of Education to explore use of the K12 High Speed Network to deliver rigorous academic curriculum online to our students.

Digital Education Initiative will provide a plan to expand distance learning opportunities for all students.

The appropriate district and site committees annually review K-12 course offerings and content. Teachers are invited to propose and/or implement new courses utilizing innovative strategies and technologies. Teachers from grades K-12 are taking advantage of our bandwidth to tap into distance learning opportunities, particularly through the use of interactive videoconferencing (IVC). Teaching and learning in LTUSD is no longer limited by the physical location of resources. District Technology Coordinators work closely with the teachers to incorporate distance learning opportunities for our students.

### Appendix J Technology Plan Review System (Etprs) Contact Information

County & District Code:	09 - 61903
School Code (Direct-funded charters only):	
LEA Name:	Lake Tahoe Unified School District
*Salutation:	Mr.
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<sup>\*</sup>Required information in the ETPRS