BERRYESSA UNION SCHOOL DISTRICT

1376 PIEDMONT ROAD, SAN JOSE, CA 95132

District Technology Plan
July 1, 2013– June 30, 2016

Will Ector, Superintendent

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District Profile

Berryessa Union School District is located in the heart of Silicon Valley, nestled against the northeast foothills in San Jose, California. The K-8 School District is comprised of ten elementary schools and three middle schools with a total enrollment of 8,000 students. Middle school graduates attend high school in the neighboring East Side Union High School District.

Representing a beautiful spectrum of ethnic and cultural backgrounds, Berryessa pupils experience a well-coordinated curriculum that reflects the commitment to helping each student achieve her/his potential and interests. Challenging educational programs, standards based curriculum, and a strong commitment to excellence produce high pupil achievement. Our students master relevant skills and consistently score above average on state and national tests. Support for all of our students gives each student the opportunity to be a successful learner. We also provide specialized programs in instrumental and choral music, the arts, and physical education and sports. A Child Development Center and State Preschool programs are also available in the district.

Laneview Elementary was recognized as a California Distinguished School in the most recent state nominations. Ruskin Elementary, Sierramont Middle School , Cherrywood Elementary and Piedmont Middle School have previously received the honorary designation. The California State Board of Education makes this award to public schools that best represent exemplary and quality educational programs. Approximately five percent of California schools are awarded this honor each year following a rigorous selection process. Eligibility is based on federal and state criteria including the No Child Left Behind program, Academic Performance Index (API), and Adequate Yearly Progress (AYP).

Additionally, Ruskin Elementary was recognized as a 2011 National Blue Ribbon School. The National Blue Ribbon School award honors public and private elementary, middle and high schools where students achieve at high levels or where the achievement gap is narrowing Ruskin was one of only 21 schools awarded the distinction in the state and 305 schools nationwide.

Parent and Community Involvement

The Berryessa Education Foundation raises funds and supports programs in the Berryessa Union School District. The Foundation has made technology grants to individual teachers for classroom equipment. The Silicon Valley Education Foundation also provides classroom grants for teachers through its Center of Innovation Program which bridges the gap between the limited technology and information that is accessible to students, parents and educators, and the greater resources available to the technology world at large. They have funded purchase of iPads, netbooks, flipcams,

MP3 players, computers and LCD projectors for individual teachers at various school sites within the district.

Parent participation in our school district is essential to our success, and we have a number of avenues through which parents can participate. Our Parent, Teacher, School Association (PTSA) meets on a scheduled basis, raises funds through donations and activities, and works on school-wide projects. Elected parents and school staff serve on our School Site Councils and meet monthly to review the academic program and budget and annually approve the use of all categorical funds tied to the Single School Plan. The site councils oversee the school plan for student achievement, and the categorical funds tied to those improvements. The English Language Acquisition Committee (ELAC) meets with the SSC to discuss the needs of English Language Learners. Informal meetings and coffees with site administrators are scheduled to assist families. Parenting classes are presented at the school site and the school participates in the districts "Parent University" day. Parents are also encouraged to volunteer in classrooms, help with lunch yard duty, and volunteer at school dances and field trips, after-school clubs and in special events like our annual "Career Day". Some parents and community members have been trained to tutor students in our Advancement Via Individual Determination (AVID) and Step Up To Algebra (SUTA) programs.

Mission Statement
Berryessa Union School District will ensure that ALL students have the skills necessary to reach high levels of academic achievement, respect self and others, and become lifelong learners.

BUSD believes that:

- *Our diversity is our strength.*
- *Taking responsibility for our actions is essential.*
- *Beliefs and actions must be aligned.*
- *Every individual has intrinsic worth.*
- *Listening to all community voices unites us.*
- *All children have the right to a safe, nurturing learning environment.*
- *All staff must be committed to a quality education and academic excellence for all students.*
- *All children must have the opportunity to gain knowledge from challenging academic subjects enhancing their ability to think*

School Parameters:

- *We will make decisions based on the perspectives of all voices in the community.*
- *We expect excellence in both teaching and learning.*
- *We will support new programs only when they are implemented with effective staff development and adequate funding.*
- *We will never give up on a child.*
- *We will be explicit about our academic expectations for students.*
- *We will foster civility, ethics and character development for each student*

BUSD Student Enrollment by Group			
Group	**Percent of Total Enrollment**	**Group**	**Percent of Total Enrollment**
White/Not Hispanic	5.2%	Socioeconomic Disadvantaged	39.3%
African American	2.1%	English Learners	38.3%
Asian	47.9%	Students with Disabilities	8.9%
Filipino	12.2%	Free/Reduced Lunch	40.8%
Hispanic/Latino	23.7%		
Other	.8%		

District Technology Plan Goals (2013-2016)

Curriculum Goals

Goal 3d1 – We will increase the number of teachers utilizing technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state Common Core standards.

Goal 3d2 - Students will use technology to master state Common Core standards, support higher level thinking skills, increase collaboration, and participate in global learning communities

Goal 3e – All K-8 students will achieve the NCLB goal of being technology literate by 8th grade. They will develop grade-level appropriate proficiency with technology and information literacy skills as outlined in the National Educational Technology Standards (NETS).

Goal 3f – We will increase student, teacher and administrator awareness of safe, secure, legal and ethical use of the Internet and other forms of electronic communication through a Cyber Ethics and Cyber Safety Program for students. [AB 307: Chavez Bill]

Goal 3g – We will educate all students, teachers and administrators in Grade 3-8 on how to avoid dangerous, inappropriate or unlawful online behavior through a digital citizenship program [AB 307: Chavez Bill]

Goal 3i.1 - Teachers and Administrators will use data-driven methods to deliver differentiated instruction.

Goal 3i.2 - Teachers will use Assessment tools to track student progress through mastery of California Reading/Language Arts and Math Common Core Content Standards as well as ELL student progress in reading.

Goal 3j - All teachers and administrators will make use of technology tools to enhance and improve communication between home and school using voice mail, email, automated notifications, and web-based services.

District Technology Goals (continued)

Professional Development Goals

Goal 4b.1 - We will prepare 21st Century Learners for the future through effective and consistent use of technology that is integrated into all curriculum areas.

Goal 4b.2 – Teachers and administrators will make use of electronic tools for record keeping, assessment and instruction.

Goal 4b.3 - Administrators and teachers will use Assessment tools to improve student achievement through data collection, analysis, reporting, and data-driven decision making.

Berryessa Union District Technology Plan
July 1, 2013 – June 30, 2016

Executive Summary

This district technology plan outlines how BUSD will integrate technology throughout the District's classroom and administrative practices to best prepare our students for productive futures in the 21st century. Information and instructional technology (IIT) in the Berryessa School District will assist staff and students to restructure the way they teach and learn. Internet connected devices will touch the life and learning of every student who attends our schools, and will play a major role in preparing them for the twenty-first century. Teachers, students, parents, and the community will be part of this transformation and all will benefit from the infusion of technology in the Berryessa Union School District.

The BUSD Technology Plan describes the process in which we will integrate devices and related technology into the district curriculum. For each goal the Technology Master Plan outlines the objectives that will support the mission of the Berryessa School District. The plan also describes current California legislation and Federal laws that inform district policy, teaching and learning in areas related to cybersafety, cyberethics and digital citizenship. Acceptable use policies, board policies and codes of conduct may also need to be updated to reflect Bring Your Own Device (BYOD) and 1:1 computing initiatives, the use of mobile devices in the classroom and expectations and disciplinary consequences related to cyberbullying and the appropriate use of technology for learning.

This plan has been developed not only to set future direction for the use of technology in teaching and learning, but also to meet certification requirements of the California Department of Education. It helps our school district qualify for e-Rate benefits and potential State and Federal funding through competitive and formula educational technology grants. Additionally, having a current State certified technology plan qualifies us for continued eligibility in the Education Technology K-12 Voucher Program.

The district plan identifies the method for routine review and revision to insure continued alignment of technology with curriculum development and the district's mission. It will be reviewed annually and specified areas may be reviewed more frequently, as indicated.

1. PLAN DURATION

The Berryessa Union District Technology Plan will be in effect from **July 1, 2013 - June 30, 2016** for a total of three years.

2. STAKEHOLDERS

2a. Planning Team

Will Ector, Superintendent
Denise Saddler, Ed.D., Assistant Superintendent, Education
Phuong Le, Assistant Superintendent, Business Services
William Jenkins, Ed.D, Director of Technology Services
Burt Lo, Manager of Educational Technology Services, SCCOE
Adriana Perez, District Librarian

District Technology Committee

William A. Jenkins, Ed.D	Director of Technology
Bonny Gregorius	Services Purchasing Manager
Martha Campos	Teacher Advisor
Maria Smith	Principal Toyon Elementary
Bobbie Infelise	Principal Noble Elementary
Rick Rauscher	Assistant Principal Piedmont Middle School
Chris Mosley	Principal Sierramont Middle School
Gayle Hybarger	2nd Grade Teacher Laneview Elementary
Cyndie Reyes	Library Media Tech
David Cohen	Board Member

District IT Staff

TBA	Network Engineer
Eddie Goehmer	PC Technician

2b. Description of how a variety of stakeholders from within the school district and the community-at-large participated in the planning process

District and site administrators, teachers, IT Staff, library media technicians and District leadership were involved in development of the technology plan through collaborative contributions made to a shared district tech plan document, through committee work and electronic collections of data and school-specific information. The district also sought input from stakeholders by electronic feedback in the form of annual surveys. The District Technology Committee will monitor and guide the implementation of the plan, and revise as needed.

3. CURRICULUM

The curriculum section of the plan focuses not only on student mastery of academic standards and technical skills, but also on helping students develop the 21st century skills of digital age literacy, inventive thinking, effective communication, and high-productivity.

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

The Berryessa Union School District uses technology in its instructional program and in the administration of the District. Technology is defined as the tools and machines used to perform tasks efficiently. Such equipment includes but is not limited to:

- Computers
- Digital cameras (still, video)
- Inter and intra district network routers and servers
- Interactive projectors or tablets
- Handheld computers (including gaming devices and mobile phones)
- Electronic keyboard devices
- Portable audio devices
- Video technologies such as video conferencing, video streaming, broadcast video
- Internet access and email services
- Web 2.0 tools and services
- Voice over IP phone services
- Document Cameras

The following table describes technology equipment and student-to-computer ratios of technology available in classrooms, media centers and computer labs for Berryessa Union students. Since the CDE's annual technology survey was discontinued due to budgeting cuts, these figures are taken from site surveys conducted for the Smarter Balanced Assessment Consortium (SBAC) Technology Readiness Survey and includes only those computers which meet the SBAC recommended hardware and software requirements.

Berryessa Union School District – Classroom Technology *Source: SBAC Technology Readiness Tool 12/14/12*			
School	**Computers**	**Students per computer**	**Classrooms with Internet**
Brooktree	65	7	29
Cherrywood	0	0	30
Laneview	0	0	35
Majestic Way	60	9	29
Morrill M.S.	40	20	45
Noble Elementary	100	7	32
Northwood	28	16	28
Piedmont M.S.	32	25	46
Ruskin	0	0	34
Sierramont M.S.	0	0	36
Summerdale	90	5	28
Toyon	83	4	32
Vinci Park	0	0	37

Elementary School Technology Access

Most elementary teachers and students are provided with access to two computers per classroom in the lower elementary grades and 4-5 classroom computers in the upper elementary grades. Some schools (Brooktree, Majestic Way, Northwood, Ruskin, Summerdale, Toyan and Vinci Park) have computer labs for K-5 students but the other six elementary schools rely solely on classroom and library computers for student usage. A few of our schools also have mobile labs that may be reserved by classroom teachers for student projects. The majority of the student computers are >4 years old and therefore are not represented on the Smarter Balanced Technology Readiness Tool survey because they will not meet the recommended technical specifications for testing in 2014-15. Student access is typically happening during school hours and once per week, but some schools provide access during the lunch hour or through after-school enrichment programs. At some sites, teachers have laptops. Schools do have classroom projection systems but they are often shared among teachers. Alternatively, some teachers are able to project onto classroom televisions. Special Day classrooms, RSP and EL students have access to technology as necessary.

Middle School Technology Access

In the Middle Schools, students have greater access to technology. Morrill Middle School provides 40 iMacs in a computer lab. The school also provides both Mac and PC laptop mobile carts that teachers can reserve for class projects. There

are fifteen interactive projectors installed in classrooms. The Special Ed classroom has four computers provided by a grant from the county office of education. At Piedmont Middle School, 80% of the core classrooms have five or more computers. There is a PC lab of 25 computers and a Mac lab of 32 iMacs. The labs are open on Tuesday, Thursday and Friday to all students and teachers. As in the Elementary schools, the majority of the student computers are >4 years old and therefore are not represented on the Smarter Balanced Technology Readiness Tool survey because they will not meet the recommended technical specifications for testing in 2014-15. The school has 17 LCD projectors available to teachers, as needed. Approximately 150 students access computers daily for technology classes. One hundred students use technology in math classes once or twice a week. Middle school libraries provide computer access before and after school. EL students have access to computers for language development. Sierramont does not have a computer lab but does provide computer access in the classrooms and Library Media Center on a daily basis.

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

Students use technology for learning at every grade level in the district. Examples of student learning include:

- Word recognition and early literacy development at the primary level
- Mathematics and Language Arts skills development in all elementary grades
- Beginning multimedia projects in science and social sciences in the upper elementary classroom
- Introduction to online research in the elementary school
- Multimedia presentation tools in all core curricular areas in middle school programs
- Internet research in all core curricular areas in middle programs
- While such use has not yet been generalized across all grade levels in all schools, examples of best practices in technology use can be found in all Berryessa schools

Elementary School Use of Technology for Teaching & Learning

- Teachers make use of technology-enriched supplementary teaching materials associated with state text book adoptions in Reading/Language Arts, Math, Social Studies and Science (McMillan, Houghton Mifflin, Scott Foresman).
- Toyon, Noble and Laneview are using ST Math courseware in the various grades. Students take part in daily or weekly math instruction in the computer labs and on classroom computers. Students work with specialized computer software in a game format to develop problem-solving skills.
- Summerdale and Vinci Park elementary schools are using Imagine Learning for EL Students.
- Some schools offer 24/7 use of SkillsTutor. The web-based program from Houghton Mifflin provides practice and reinforcement in reading comprehension, vocabulary, writing and language arts.

- All elementary schools are licensed for Accelerated Reader, which differentiates reading practice, provides daily information about student reading and makes it easy to continuously monitor comprehension and track the time students spend reading.
- Accelerated Math is used to create individualized assignments aligned with state standards and national guidelines.
- Several schools are piloting online district assessments with SchoolCity to provide information on student performance
- EL Students make use of Dyn-Ed *Let's Go!* English Language Learning Solutions for language acquisition.
- Some teachers use Read Naturally Pro to help students develop reading fluency.
- Students in the upper elementary grades learn information literacy skills in the process of completing guided research reports on such topics as the Gold Rush, California Missions, Native Americans and Early Explorers.
- One school has created an ePal program with 2nd and 3rd graders in other school districts.
- Teachers use class web pages to post helpful links to curriculum-based resources that support what is being learned in the classroom.

Middle School Use of Technology for Teaching and Learning

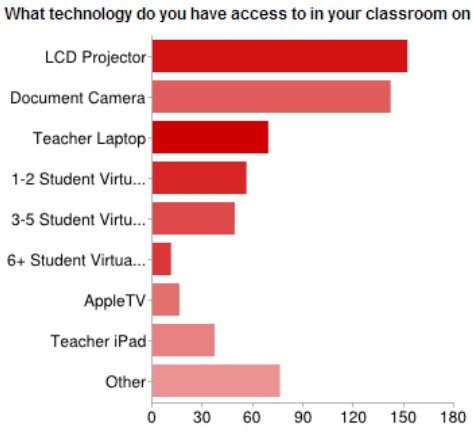
- Teachers make use of technology-enriched supplementary teaching materials associated with new state text book adoptions in Language Arts, Math, Social Studies and Science (Holt Rinehart L.A., Prentice Hall Math, CPO Science, Glencoe/McGraw Hill Social Studies).
- Accelerated Math is used to create individualized assignments aligned with state standards and national guidelines.
- STAR Math and Reading are used as assessment tools to provide information on student performance
- EL Students make use of Dyn-Ed *Let's Go!* English Language Learning Solutions for language acquisition.
- Many teachers have access to videos, audio files and lesson plans for differentiated instruction.
- Math students at some sites use computers at least once a week for ST Math.
- Middle School students use Microsoft Office Suite, Open Office Suite, Imovie, Flash, Photoshop, iWeb and Illustrator.
- 6th grade students take a technology skills class that includes basic applications, computer ethics and presentation skills.
- 7th and 8th grade students can take technology electives in areas such as Tech II advanced applications, yearbook and journalism.
- In Newspaper Class, students learn to make web pages and animations, to record their own shows and publish them with Garage Band.
- In after-school enrichment classes, students write, direct and produce their own movies.
- Some students have participated in ThinkQuest project-based learning activities.
- Some GATE students have participated in a digital storytelling project by creating inter-generational videos to document World War II veteran experiences.

- GATE students have taken Flash and Dreamweaver classes.
- Some 7th and 8th grade GATE students participate in simulated "Future Cities" competitions online, a partnership in conjunction with National Engineer's week, which aims to encourage interest in STEM careers.

Administrator Use of Technology

District and site administrators actively use technology daily for a range of tasks, including communication with colleagues, teachers and parents. Technology is also used to analyze data, track and report on student progress. The use of technology to support data driven decision-making has increased over the past three years due to increased use of student assessment tools, including Infinite Campus and School City.

In a recent survey of classroom technology use (Google Forms) teachers reported:



LCD Projector	**152**	63%
Document Camera	**142**	59%
Teacher Laptop	**69**	29%
1-2 Student Virtual Desktops	**56**	23%
3-5 Student Virtual Desktops	**49**	20%
6+ Student Virtual Desktops	**11**	5%
AppleTV	**16**	7%
Teacher iPad	**37**	15%
Other	**76**	32%

People may select more than one checkbox, so percentages may add up to more than 100%.

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

The district's strategic plan reflects the district's mission statement, "*BUSD will strive to ensure that all students have the skills necessary to reach high levels of academic excellence, respect self and others, and become lifelong learners.*"

The Berryessa School District Technology Plan for 2013--2016 draws from the District Master Plan, Site Plans and School Initiatives as well as from previous Technology Plans of the District and Guidelines from the California Department of Education. It has been designed as a curriculum-driven technology plan that supports district and school improvement efforts, especially continued growth in student achievement (API).

The District provides a curriculum that is based on the State content standards and performance outcomes. It is expected of staff that they design their curriculum to promote a rigorous academic content that is challenging, integrative and exploratory in nature to ensure learning. The district's goal is to use technology not as a subject unto itself but as a diverse set of tools to enhance, if not inspire, student learning.

This plan supports district curricular goals for student achievement in language arts and math. It also supports the LEA plan developed by the district, site and Leadership Teams with goals such as increasing opportunities for differentiated instruction, using the web site to disseminate information and increasing parent-board-community relationships.

Four Strategies for Action Plan Development:

Student Achievement
All students will succeed when we have high academic standards and high expectations, assessed at set intervals for continuous improvement.

Community Involvement
All students will succeed when all stakeholders work together to fully integrate all aspects of our diverse community into full support and implementation of the mission of the district.

Staff Development
All students will succeed when we have quality staff that use effective pedagogy and best practices in all subject areas.

Communication
All students will succeed when we have effective two-way communication, internally and externally, and authentic dialogue among all community stakeholders to build support and understanding.

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 and academic content standards

Teacher Use of Technology

Goal 3d1: We will increase the number of teachers utilizing technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.			
Objective 3d: By June 2016, 90% of classroom teachers will demonstrate increased use of technology as a tool to improve delivery of instruction and to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.			
Year 1 Benchmark: By June 2014, 40% of classroom teachers will demonstrate increased use of technology as a tool to improve delivery of instruction and to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.			
Year 2 Benchmark: By June 2015, 70% of classroom teachers will demonstrate increased use of technology as a tool to improve delivery of instruction and to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.			
Year 3 Benchmark: By June 2016, 90% of classroom teachers will demonstrate increased use of technology as a tool to improve delivery of instruction and to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.			
3d1. Activities & Implementation Steps	**Timeline**	**Person(s) Responsible**	**Monitoring & Evaluation**
Plan units of practice that incorporate use of technology and that have "real world" relevancy and are integrated to the grade level curricula.	2013-2016	Grade Level teachers, Tech Leaders, Library Media Techs	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
Provide collaboration time for Site Administrators and teachers to align standards-based instruction, analyze district and standardized assessment data, identify student strengths and needs, and plan next steps, including re-teach strategies using technology resources (video, tutorials, manipulatives and games).	9/2013 – 9/2016	Asst Sup't Site Administrators Tech Leaders	
Allocate teacher time for professional development when the district sets its annual calendar.	Annually	Site Administrators	
Review new electronic learning resources that facilitate differentiated instruction.	9/2013 – 6/2016	Teacher Tech Leaders	
Dedicate one staff meeting per trimester at each school site exclusively for technology demonstration and training.	Tri-Annually	Site Administrators Tech Leaders	
Communicate District and site hardware, software, and training needs to site and IT administration annually.	9/2013 – 9/2016	Classroom Teachers, IT Staff, Library Media Techs	
Deploy assessment tools to measure staff & students' levels of technology proficiency (e.g. use a tool like BrightBytes [http://www.brightbytes.net/]	2013	IT Staff, Teacher Leaders	
Provide in-class, after-school and release time support on an as-needed basis by	2013-2016	Site Administrators Teacher Leaders	

skilled in-district staff member expertise			
Utilize Google docs to survey staff and develop targeted staff training.	9/2013	Administrators Teacher Leaders	
Develop a template outlining levels of technology proficiency for each grade.	Fall, 2013-2016	District Tech Committee	
Implement and review results from assessment tools measuring students' levels of proficiency and adjust goals, activities and implementation steps accordingly.	Annually	District tech committee, Site Administrators	
Continue collaboration around educational use of technology and best practices of teaching.	Monthly	Administrators Technology Leaders	
Evaluation Instruments & Data			
Evaluation Instruments: Teacher surveys. Professional Development feedback. Training materials. Teacher lesson plans. Logs of technology usage including Mobile Carts and peripherals. Student performance indicators (see Appendix) and activities addressing performance indicators. Samples of student work. Oral and written reports to the School Board and community.			

Student Use of Technology

Goal 3d2: Students will use technology to master content standards, support higher level thinking skills, increase collaboration, and participate in global learning communities.			
Objective 3d.2a: By June 2016, 100% of kindergarten-2nd graders will use technology to practice reading and math skills.			
Objective 3d.2b: By June 2016, 100% of 3rd-5th graders will use technology to read, write, research, foster mathematical thinking skills, and collaborate with peers.			
Objective 3d.2c: By June 2016, 100% of 6th-8th graders will use technology to read, write, research, foster problem solving skills, participate in global learning communities, and collaborate with peers.			
Year 1 Benchmark: By June 2014, 50% of students will use technology to meet their grade-level objectives as stated above.			
Year 2 Benchmark: By June 2015, 70% of students will use technology to meet their grade-level objectives as stated above.			
Year 3 Benchmark: By June 2016, 100% of students will use technology to meet their grade-level objectives as stated above.			
3d.2 Activities and Implementation Steps	**Timeline**	**Person(s) Responsible**	**Monitoring and Evaluation**
Teachers [with adequate professional development and IT support] will adapt lesson plans so that students in grades K-2 will create at least one assignment that demonstrates appropriate use of technology skills to communicate understanding of learning objectives.	At least once per year.	Site Administrators, Teachers, IT staff	Curriculum Groups, Grade Level Coordinators and Site Administrators will track the implementation of all activities, reporting progress annually at district meetings. Modifications to district activities will
Teachers will adapt lesson plans so that students in grades 3-4 will create at least two assignments that demonstrate appropriate use of technology to communicate	2013-2016	Grade level Teachers	

understanding of learning objectives.			be made as needed.
Teachers will adapt lesson plans so that students in grades 5-6 will create at least three assignments that demonstrate appropriate use of technology to communicate understanding of learning objectives.	2013-2016	Teachers, site administrators	
Teachers in each core subject will adapt lesson plans so that students in grades 7-8 will create at least four assignments that demonstrate appropriate use of technology to communicate understanding of learning objectives.	2013-2016	Teachers, site administrators	
3d.2 Evaluation Instruments and Data			
Evaluation Instruments: Logs of mobile lab and computer lab usage, samples of student projects, teacher lesson plans, rubrics, and other formative assessments.			

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

NCLB Part D, Section 2402 states that all school districts must ensure the technology literacy of their students by the eighth grade. Some of the ways to make this determination are to use Google Forms, teacher generated surveys and District assessments to periodically review student proficiency in information literacy skills.

Technology Literacy

The student NETS were revised in June 2007 to meet the demands of Digital Age learning. (See: Appendix A). These new student standards focus on skills and knowledge that students need to learn effectively and live productively in an increasingly digital society. Cognitive and learning skills, as well as creativity and innovation, are the focus now--and information and media literacy are also elevated in importance. The changes *shift away from a focus on competency with technology tools* and emphasize skills required in a digital world to produce and innovate using technology.

The new ISTE student standards are organized into six categories:

"What students should know and be able to do to learn effectively and live productively in an increasingly digital world ..."

- **Creativity and Innovation**
- **Communication and Collaboration**
- **Research and Information Fluency**
- **Critical Thinking, Problem Solving, and Decision Making**
- **Digital Citizenship**
- **Technology Operations and Concepts**

Information Literacy

Our education system and society not only require students to know more than they ever have before, they require that students be able to communicate what they know about academic concepts and theories. Students will be given more opportunities to gather and organize information. One of our major goals of the curriculum component will be the development of information literacy skills and the ability of students to learn independently. Information literacy enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. An information literate individual is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

Information literacy skills are lifelong learning skills that require a student to apply higher-level thinking. These skills are not taught in isolation but rather should be integrated throughout the curriculum. Information literacy requires collaboration between the classroom teacher and the Library Media Technician. They will work together to teach the essential knowledge and skills that prepare students to locate, analyze, evaluate, interpret and communicate information and ideas in an information-intensive environment. Authentic practice of these skills will enable students to realize their potential as informed citizens who think critically and solve problems

The use of technology is an integral part of information literacy. In Berryessa schools, this translates into effectively searching the library catalog, online databases, reference sources, Internet critical evaluation of authority, credibility and currency of information note taking the presentation of information in a variety of formats such as word processing and multimedia.

Goal 3e - All K-8 students will achieve the NCLB goal of being technology literate by 8th grade. They will develop grade-level appropriate proficiency with technology and information literacy skills as outlined in the National Educational Technology Standards (NETS)			
Objective 3e: By June 2016, 90% of all K-8 students will demonstrate proficiency in technology and information literacy skills at the appropriate grade level, as measured by the National Educational Technology Standards (NETS) Performance Indicators.			
Year 1 Benchmark: 40% of all K-8 students will demonstrate proficiency in technology and literacy skills at the appropriate grade level, as measured by the National Educational Technology Standards (NETS) Performance Indicators.			
Year 2 Benchmark: 60% of all K-8 students will demonstrate proficiency in technology and literacy skills at the appropriate grade level, as measured by the National Educational Technology Standards (NETS) Performance Indicators.			
Year 3 Benchmark: 90% of all K-8 students will demonstrate proficiency in technology and literacy skills at the appropriate grade level, as measured by the National Educational Technology Standards (NETS) Performance Indicators and Marin County Librarian Scope & Sequence.			
3e. Activities & Implementation	**Timeline**	**Person(s) Responsible**	**Monitoring & Evaluation**
Teach students how to apply digital tools to gather, evaluate and ethically use online information.	Ongoing	Library Media Techs, classroom teachers	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
Raise teacher awareness of the ISTE NETS standards for Students and analyze how they may apply to the curriculum.	Annually at the start of school.	Site Administrators, Teacher Leaders, District Tech Committee, Library Media Techs	
Explore ways to embed technology skills into the curriculum and develop assignments where students can demonstrate mastery of both the curriculum and technology skills.	At least once per trimester.	Classroom teachers, library media techs	
Formalize a way for students to acquire information literacy skills in connection with research-based projects.	2013-2016	Grade level and Subject area teacher groups, Library Media Techs	
Assess student progress on an annual basis using a free tool like Google forms or teacher-generated surveys and assessments.	2013-2016	Classroom teachers, Library media techs	
Collect examples of best practices.	Ongoing	Site administrators, PLCs, District Tech Committee	
Begin to implement and articulate grade-level information literacy standards.	2012-2016	Library Media Techs Classroom teachers	
Collaborate in grade level groups to develop and share solutions for incorporating technology skills into student learning experiences and to determine which skills will be covered in which classes.	2013-2016	Library Media Techs, PLCs, Grade Level and Subject area teachers	
Evaluation Instruments and Data			
Evaluation instrument: grade level and core subject area meeting notes, teacher use of K-12 rubric, teacher observation, student data from Simple Assessment and other surveys, evidence of lesson plans that incorporate technology standards, rubrics.			

3f. List of goals and an implementation plan that describe how the district will address ethical use of information technology so they can distinguish lawful from unlawful uses of copyrighted works, including: the concept and purpose of copyright and fair use; lawful and unlawful downloading and peer-to-peer file sharing; and avoiding plagiarism

Currently, cyberethics and cybersafety education is left to the individual teacher and is not formalized throughout the district. Some of the measures in place are described below.

- The Library Media Techs, in collaboration with classroom teachers, address issues surrounding plagiarism and giving appropriate credit for sources such as the downloading images
- Site administrators at some schools have developed a computer use agreement for the upper grade students that begins to address Digital Etiquette, Digital Rights and Responsibilities, and Digital Security
- All families sign the Acceptable Use Policy for technology
- Some teachers provide parent education on cyberethics topics at the beginning of the school year.
- Individual teachers address the issues of cyber safety
- Discussion of plagiarism and copyright begins by third grade during note taking and research; students are taught to document sources.
- In fourth and fifth grade, students are taught to create Bibliographies and to cite sources, giving credit to the author.
- Students are taught how to avoid copyright and plagiarism during note taking.
- Students are taught that other students' logins and digital work are private domains.
- There is a one-day introductory lesson in the 6th grade Tech Class with a focus on Acceptable Use.
- CyberEthics is integrated into some research lessons in the library in Middle School; however, not all teachers bring their students into the library for those research skill lessons.

Our goal is to use contemporary information, communication and learning technologies in a manner necessary for successful life-long learning and citizenship in the knowledge-based, digital, and global 21st century, which includes the abilities to effectively communicate and collaborate; to analyze and solve problems; to access, evaluate, manage and create information and otherwise gain information literacy; and to do so in a safe and ethical manner. Several new pieces of legislation may help drive this effort forward.

New Laws and Standards Related to CyberSafety and CyberEthics

I. Federal and State Legislation

This district technology plan describes new California legislation and revised Federal laws that will influence district policy, teaching and learning in areas related to cybersafety, cyberethics and digital citizenship. Acceptable use policies, board policies and codes of conduct may also need to be updated.

- **Assembly Bill 86**
  Effective January 1, 2009, California Education Code 48900 has been amended to authorize school districts to suspend or expel students for bullying, including cyberbullying. AB 86 will influence not only tech plan development, but also development of individual site plans. Each year, every school in California is required to review their School Safety Plan in order to be eligible for Safe School funding. Safe School Planning teams are now authorized to include training on cyberbullying awareness in their plan.

  Grounds for student suspension or expulsion were amended to include bullying by electronic means:
  - … While on school grounds
  - … While going to or coming from school
  - … During the school lunch period whether on or off campus
  - … During or while going to/coming from a school activity

- **Assembly Bill 307 [Chavez Bill]**
  (Education Code Section 51871.5) The guidelines and criteria for federal funding shall include a component to educate pupils and teachers on the appropriate and ethical use of information technology in the classroom, Internet safety, the manner in which to avoid committing plagiarism, the concept, purpose, and significance of a copyright so that pupils are equipped with the skills necessary to distinguish lawful from unlawful online downloading, and the implications of illegal peer-to-peer network file sharing

- **S. 1492 [Broadband Data Improvement Act]**
  Signed into law on October 10, 2008, the Broadband Data Improvement Act requires schools receiving federal E-Rate discounts on telecommunications services and internet access to educate their students "about appropriate online behavior, including interacting with other individuals on social networking sites and in chat rooms and cyberbullying awareness and response."

State & Federal Legislation *(cont'd)*

- **ERATE**

  The **Protecting Children in the 21st Century Act** [S.49] adds additional requirements to the schools and libraries that receive E-rate discounts. These requirements are chiefly focused on educating minors about appropriate online behavior, including:

  - Interacting with other individuals on social networking websites
  - Interacting with others in chat rooms
  - Cyberbullying awareness and response

  If an E-rate applicant's Internet Safety Policy does not include provisions that address these new requirements, the organization will be required to review and revise their policies and practices to incorporate these items in order to receive E-rate discounts.

- **CIPA Compliance**
  Schools and libraries must have an Internet safety policy. For schools, the policy must include monitoring the online activities of minors. The policy must address the following issues:

  - The safety and security of minors when using email, chat and the Internet
  - Unauthorized access, including hacking and other unlawful activities by minors online.
  - Access by minors to inappropriate matter on the Internet and World Wide Web
  - The safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communication
  - Unauthorized disclosure, use, and dissemination of personal information regarding minors
  - Measures designed to restrict minors' access to material harmful to minors

II. Digital Citizenship/New ISTE Standards

ISTE is the International Society for Technology in Education. The updated ISTE Standards for Students and Teachers include digital citizenship components, which will also influence the directions of this district technology plan.

Standard V - Students
Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students will:

a. Exhibit leadership for digital citizenship
b. Advocate and practice safe, legal, and responsible use of information and technology
c. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
d. Demonstrate personal responsibility for lifelong learning.

Standard IV - Teachers
Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers will:

a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information.
d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools.

Goal 3f: We will increase student, teacher and administrator awareness of safe, secure, legal and ethical use of the Internet and other forms of electronic communication through a Cyber Ethics program of instruction for students.

Students will be able to distinguish lawful from unlawful uses of copyrighted works, including the following topics: the concept and purpose of both copyright and fair use; distinguishing lawful from unlawful downloading and peer-to-peer file sharing; and avoiding plagiarism. [AB 307]

3f. Activities & Implementation	Timeline	Person(s) Responsible	Monitoring & Evaluation
Establish a representative digital citizenship committee of Berryessa Union staff, parents and students.	2013-2014	Principal, Site Council	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
Implement Common Sense Media Digital Citizenship Curriculum	2013-2016	Classroom Teachers, Library media techs	
Educate students on topics such as copyright law, pirating music, plagiarism, identity theft, privacy and malicious or destructive behavior online.	Ongoing	Teachers, Library media techs	
Provide opportunities for students to collaborate globally online and to apply norms of appropriate, responsible behavior with regard to technology use.	2013-2016	Classroom Teachers, Library Media Techs	
Make all parents, teachers, and students aware of District policy on ethics in regard to the use of technology, including new laws pertaining to cyber bullying.	2013-2016	Asst Sup't, Site administrators, classroom teachers	
Create a forum for parent education on digital citizenship with at least one presentation annually.	2013-2016	Principal, PTA, Teachers, School Law Enforcement, Common Sense Media, etc.	

Evaluation Instrument: Board policies on cyberbullying and cyberethics, AUP, logs of teacher trainings, digital citizenship curriculum materials, examples of student work, poster distribution, incident reports for cyberbullying.

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

Current instruction on Internet safety depends on the knowledge, interest and ability of teachers to integrate it into the curriculum. There is no set curriculum for Internet safety. Implementation varies from school to school. However, Internet access is filtered at a district level to prevent access to inappropriate sites.

Students use online communication technology extensively outside of the school day. However, it is seldom used during the school day. Students know their network accounts are not private. Much of what we teach students about cybersafety is informal, which

contributes to the hit-and-miss nature of Internet safety education. Our students need to be able to collaborate and experiment in a safe and protected online environment in order to develop the 21st century skills they will need to function as global citizens in the workplace and at school.

Some of the cybersafety measures currently used in the district are:

- All schools provide filtered internet access to prevent inappropriate material from being viewed.
- Parent education on cybersafety is provided at some schools on Back To School Night.
- Students are taught not to divulge personal information online.
- Educational resources from Common Sense Media are used in some schools.
- Some schools have used NETSMARTZ curriculum provided by the San Jose Police Department.
- Librarians and teachers screen websites for content and instruct students regarding website safety.
- Some teachers and library media techs provides lessons for students on website evaluation.
- Students are instructed on protecting their district provided accounts and respecting the privacy of each other in grades four and five
- Students' online work is monitored closely in the classroom and library
- Students who use file-sharing are taught how to grant specific permission for others to view their files.

Goal 3g: We will educate all students, teachers and administrators in Grades 3-8 on how to avoid dangerous, inappropriate, or unlawful online behavior.			
Students will understand how to protect online privacy and avoid online predators [AB 307]			
3g. Activities & Implementation	**Timeline**	**Person(s) Responsible**	**Monitoring & Evaluation**
Each school site will continue to develop and incorporate digital citizenship curriculum that is integrated with character education themes and encourages positive social action.	2013-2014	Principals, Asst Sup't, Librarians, Safe School Planning,	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
Continue integrating curriculum that teaches students that online actions have offline consequences and that teaches them that their "digital footprint" will follow them for the rest of their lives.	2013-2014	Library Media Techs, Classroom Teachers, Safe School Planning team	
As responsible digital citizens, teach students that they must protect their information from outside forces that might cause disruption or harm.	Ongoing,	Library Media Techs, classroom teachers	
Incorporate digital citizenship discussions into existing curriculum development committees.	2013, ongoing	Asst Sup't, SITE PRINCIPALS	
Work with SCCOE to promote parent attendance at countywide cyber safety workshops that address youth issues.	2013, ongoing	Principals, Safe School Planning, District Tech Committee	
Integrate digital citizenship information into parent communication.	2013, ongoing	Asst Sup't, Principals, Safe School Planning	
Evaluate board policies for educational support and appropriate implementation of cell phone use, social networks, web 2.0 tools, BYOD, mobile devices, etc. in the classroom.	2013	IT Director, Asst Sup't, Principals, School Board	
Integrate cyber-bullying reporting into existing discipline reporting procedures and track incidents in the District Student Information System.	2013	Asst Sup't, Principals, District Tech Committee	
Evaluation Instruments and Data			
Evaluation instrument: board policies, teacher training materials, lesson and class meeting plans, student projects, digital citizenship materials, parent/student handbook, promotional flyers, parent education materials, parent communication and discipline logs, Simple Assessment logs and test scores.			

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

- Many students in Berryessa Union School District have access to computers in their classrooms, the library and/or on mobile carts at all school sites.
- Some classrooms are equipped with laptops and digital projectors so that technology may be used for whole group instruction.
- Students have 24/7 access to textbook supported materials.
- Text-to-speech screen reader technology is employed in support of differentiated access to state standards.
- Students with an active Individualized Education Program have appropriate access to technology hardware, peripherals, and software including assistive technology as deemed appropriate and defined by the IEP site team and the students' IEP goals.
- English Learners have appropriate access to technology hardware, peripherals, and software needed to support their English language acquisition as well as their achievement of the academic standards.
- Students have access to computers for intervention purposes or through enrichment classes after school.
- Internet access is available at public libraries and other locations that are publicly accessible (e.g., the California State Library) for students who do not have computers at home.

3i. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan to use technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs.

Current Teacher and Administrator uses of Technology for Record Keeping and Assessment

- Using publisher unit assessments, district benchmark assessments, supplemental tests, and annual STAR reports, teachers analyze student performance to guide their instructional planning individually and with their grade-level or subject area teams.

- Infinite Campus is currently used to provide access to student demographics, attendance, schedules, discipline, grades, extended test histories, and state reporting codes. Infinite Campus provides Berryessa with the integrated tools that allow us to streamline student administration, enable stakeholder collaboration and individualize instruction. The system serves as a district-wide data warehouse allowing student data to be entered once and leveraged across the entire district supporting data-driven decision-making. The system is web based and has the ability to provide parents and students access to information.

- Berryessa Union School District has adopted School City, a web-based relational data warehousing system. It contains data from multiple school district databases, all collected together in one place. The data warehouse pulls relevant data from the student information system, human resources, special education, and student assessment. Using School City, when data is disaggregated, administrators can understand whether variables such as student mobility, professional development for teachers, course sequencing or parental involvement are affecting student performance. Teachers will have a broad range of tools to collect and analyze data, and richer sets of student data to guide instructional decisions.

The district has a Program Manager for Assessment and Program Evaluation whose duties include the coordination and validation of student data in all systems, working with teachers and administrators to analyze and learn from student data, providing technical assistance and training around data systems to teachers and administrators, and running annual CSIS, CBEDS, CALPADS, STAR, CELDT and other reports required by governmental agencies.

Goal 3ia: Teachers will use data driven methods to deliver differentiated instruction			
Objective 3ia: By June 2016, 80% of all teachers will access and utilize School City to monitor student progress and drive instructional practice.			
Year 1 Benchmark: By June 2014, 30% of all teachers will access and utilize School City to monitor student progress and drive instructional practice.			
Year 2 Benchmark: By June 2013, 60% of all teachers will access and utilize School City to monitor student progress and drive instructional practice.			
Year 3 Benchmark: By June 2016, 80% of all teachers will access and utilize School City to monitor student progress and drive instructional practice.			
3i Activities & Implementation Steps	**Timeline**	**Person(s) Responsible**	**Monitoring & Evaluation**
Standardize procedures for input / output.	2013-2014	SITE PRINCIPALS	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
Provide professional development for Administrators.	2013- Ongoing	District Administrators	
Provide professional development for teachers on data.	2013-2016	District Administrators, SCCOE	
Provide professional development in the use of standards-aligned test banks.	2013-2016	District Administrators	
Ensure that administrators have the fundamental skills to interpret data at the site level.	2013	Asst Superintendent	
Ensure that all technology staff assigned to School City support are proficient in data management	2013-2014	IT, Asst Superintendent	
Review the types of data collected and used for school improvement efforts for possible changes	Annually	IT, SITE PRINCIPALS	
Teach staff to use data thoughtfully. Sustain a culture of continuous improvement through data driven decision-making.	Ongoing	Principals, Teacher Leaders	
Gather details on the process in which teachers are differentiating instruction in response to students who need additional support.	June 2014	Teachers, Resource specialists	
Evaluation Instruments and Data			
Evaluation instrument: Administrator and teacher training materials, sign-in sheets, log-ins to site, usage records, School City Custom Reports.			

Goal 3ib: Teachers will use data driven methods to monitor student records and progress

Objective 3ib: By June 2016, 100% of all teachers will access and utilize Infinite Campus to monitor student records and progress.

Year 1 Benchmark: By June 2014, 50% of all teachers will access and utilize Infinite Campus to monitor student progress and drive instructional practice.

Year 2 Benchmark: By June 2013, 75% of all teachers will access and utilize Infinite Campus to monitor student progress and drive instructional practice.

Year 3 Benchmark: By June 2016, 100% of all teachers will access and utilize Infinite Campus to monitor student progress and drive instructional practice.

3i Activities & Implementation Steps	Timeline	Person(s) Responsible	Monitoring & Evaluation
Standardize policies and procedures for content and use of Infinite Campus.	2013-2014	Site Principals District Staff Outside Vendor	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
Provide professional development for Administrators, Site coaches and Teacher Coaches.	Ongoing	District Staff Outside Vendor (Onsite, self paced, & webinars)	
Provide professional development for teachers.	Ongoing	District Staff Teacher Coaches Outside Vendor	
Provide professional development for classified staff.	Ongoing	District Staff Site Coaches Outside Vendor	
Provide professional development in the use of standards-aligned report cards	2013-2014	District Staff Teacher Coaches Outside Vendor	
Ensure that administrators have the fundamental skills to interpret data at the site level.	2013	Asst Superintendent	
Ensure that all technology staff assigned to Infinite Campus support are proficient in data management	2013-2014	Asst Superintendent	
Develop goal-monitoring reports for administrators and teachers	2014	Site Principals	
Expand the types of data collected and used for school improvement efforts	Annually	Site Principals	
Teach staff to use data thoughtfully. Sustain a culture of continuous improvement through data driven decision-making.	Ongoing	Site Principals, Teacher Leaders	
Gather details on the process in which teachers are differentiating instruction in response to students who need additional support.	June 2014	Teachers, Resource specialists	

Evaluation Instruments and Data

Evaluation instrument: Administrator and teacher training materials, sign-in sheets, log-ins records, reports created in Infinite Campus

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

Teachers are comfortable using e-mail as a communication tool both between colleagues at school and between teachers and parents. They also use many other forms of electronic communication. Parents without computer/internet access can sign-up to receive paper copies of the information.

Some of the current measures in place for home/school communication are described below:

- The Voice over IP Phone System is available school- and district-wide and provides parents with voice mail communication.
- Voice messaging is accessed through staff email accounts.
- BUSD makes use of Blackboard Connect to push out timely and emergency alerts to parents.
- All staff members are provided with district email accounts for access 24/7 from school and at home.
- The District website provides information to parents including a district calendar.
- School principals send a weekly message to parents with upcoming events.
- The district seeks input from stakeholders by electronic feedback in the form of annual parent and staff surveys.
- The District uses a standardized format for school web sites within the district.
- Many teachers have used district templates to create class web pages.
- Some elementary and middle school teachers maintain class web sites that may include the weekly newsletter, blog, calendar, photos, homework assignments and student work.
- School web sites include links to teacher sites, school calendars and daily bulletins.
- Infinite Campus is used extensively in the middle schools. Parents and students can access assignments and grades. Students use "digital lockers" to store and share files and every evening, assignments and grades are emailed home.
- Some teachers in both elementary and middle schools use a class blog.
- The library link on school websites provides parents and students with links to important learning tools such as web-based support materials for state adopted text books, online databases and access to the library catalog
- Some teachers provide parents with electronic versions of class newsletters via email
- At some schools, the PTA posts its own newsletter online and sends communications to parents on a regular basis.
- PTA calendars are posted on school sites.

3J. All teachers and administrators will make use of technology tools to enhance and improve communication between home and school using voice mail, email and web-based services such as Blackboard Connect and Infinite Campus.

Objective 3j: By June 2016, 100% of teachers and administrators will communicate with parents using voicemail, email and web-based services

Year 1 Benchmark: By June 2014, 60% of teachers and administrators will communicate with parents using voicemail, email and web-based services.

Year 2 Benchmark: By June 2016, 80% of teachers and administrators will communicate with parents using voicemail, email and web-based services

Year 3 Benchmark: By June 2016, 100% of teachers and administrators will communicate with parents using voicemail, email and web-based services

3j. Activities and Implementation Steps	Timeline	Person(s) Responsible	Monitoring and Evaluation
Collect email addresses for all parents of students.	Annually, August	Administrative Asst.	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
Optimize parent contact database, by training parents and staff on how to keep email and emergency contacts up-to-date.	Annually, Aug/Sep	Administrative Asst., Site Principals	
Collect data on how parents are accessing school information (voicemail, email, blogs, listserv, other) in annual survey to parents.	Annually, May		
Provide parents with opportunities to leave feedback on school web sites.	2013-2016	IT Staff	
Continue annual surveys to parents (including EL parents) on program effectiveness.	Annually (third trimester).	Site administrators	
Refine and publish communications methods and policies (such as preferred methods, content, frequency, style, publishing permissions, student photo policy, etc.).	Annually, Aug/Sep	Administrative Assistant, Site Principals	
Implement Administrative emergency messaging and general communications systems for contact with staff, parents, and other stakeholders via VOIP Software.	Annually, Aug/Sep	Administrative Assistant. Site Principals	
Develop a policy for providing essential communications to families without access to the internet and to non-English speaking families.	In-Place	Site Principals, DELAC	
Train teachers on use of bilingual tools (such as Google Translate).	As needed.	IT Staff, Teacher Leaders	
Contunue to train teachers on using Infinite Campus as a tool for communicating with parents at all grade levels.	2013-2016	IT Staff, Site Principals	

Train teachers and administrators about email and web publishing, with focus on tools and policies (appropriate content, privacy, safety).	Annually, Aug-Oct	IT, District Tech Committee	
Train and coordinate school and District office staff to maintain public and private event calendars.	Ongoing	Site Principals, Exec Asst	
Develop district-wide standards for electronic home-school communication.	2014-2016	Site Principals, District Tech Committee	
Create and update classroom and administrator communication pathways.	Ongoing	IT, teachers and administrators	
Evaluation Instruments and Data			
Web, email and RSS feed logs, District downloads of information. Number of logins and visits to teacher and administrator websites, number of parents subscribing to RSS feeds, volume of email traffic to parent listserves. Revive annual parent and staff surveys of communication use.			

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 degree to which the technology is integrated into the learning environment and supports classroom and school management will be measured using indicators such as student-computer ratios, student and teacher surveys (CBEDS data, State Survey Data and BrightBytes), and classroom observations of student engagement with technology resources.

Curriculum and Grade Level teacher groups are the primary personnel responsible for the K-8 curriculum scope and sequence throughout the District. As indicated in the Monitoring columns of the goal tables in Sections 3d-3j, these groups together with the Site Administrators and District Tech Committee will track the development and implementation of curriculum activities and accomplishments periodically, and report progress at regular District and Site administration meetings. Modifications to tech plan activities will be made as needed in order to insure that the District meets or exceeds measurable objectives.

Board members, district and site administrators will oversee all policies on ethical use of technology and will be responsible for revising the technology use agreement to include use of new technologies like cell phones. Administrators will review their School Safety Plan annually to be sure it includes a component on cyberbullying awareness.

Teachers and administrators will complete surveys of technology proficiencies annually. Students in selected grades will participate in an annual student survey of technology activities.

District administrators will survey parents annually on home/school communications, their preferred methods and tools like Blackboard Connect. Modifications will be made based on the needs of all ethnic populations. Annually, the curriculum and grade Level groups and District Tech Committee will review synthesized and analyzed data and make adjustments to Single Plans for Student Achievement, Site and District Technology Plans, as well as provide data analysis for the Assistant Superintendent and the Board of Trustees.

4. PROFESSIONAL DEVELOPMENT

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

The BUSD Professional Development plan is aligned with the goal of ensuring that all students become proficient on the CSTs. The focus is on providing multiple opportunities for staff to understand the needs of our EL population, gain multiple use data to inform instruction, strategies to differentiate instruction, become sensitive to the cultures that represent out schools, and have professional conversations about teaching and learning.

- BUSD professional communities use the Cycle of Inquiry as a model for continuous improvement. Teachers share models of best teaching practices, examine student work or test data, and collaborate in developing model lessons related to the Standards.

- Site-level Staff Development focuses on both department and school-wide analysis of summative and formative data. Teachers collaborate to determine effective instructional strategies responsive to student learning needs.

- Teachers and administrators receive training on analysis of sub-group responsiveness to instruction, enabling the staff to differentiate presentations and support for various learners, thereby increasing points of access to learning, engagement, retention of knowledge and student ability to apply their learning.

- District administrators have received CSIS and CALPADS training on state reporting, data preparation, the certification process and system administration.

- Teachers and administrators have received training on use of video streaming, ST Math, Accelerated Reader, Google Apps for Education, CatapultCMS (web design) and textbook adoptions with technology components.

- The district provides 9 days of 3-hour staff development training for teachers and administrators plus additional training opportunities throughout the school year. During these staff training hours, which are usually held after 1:00 p.m. on Berryessa's weekly shortened Thursdays, the staff learns new instructional methods, gets classroom organization ideas, and learns other strategies for improving pupil performance in all subject areas. The theme for staff development in the past has been "using student assessment data to focus instruction."

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

Goal 4b. We will prepare 21st Century Learners for the future through effective and consistent use of technology that is integrated into all curriculum areas.			
Objective 4b.1.1: By June 2016, 100% of teachers will show an increase in their technology proficiencies and basic computer skills.			
Objective 4b.1.2: By June 2016, 100% of teachers will increase their proficiency in integrating technology into the curriculum, as they develop 21st century learning skills, Web 2.0 tools, global awareness, cyberethics and cybersafety, and other elements of 21st century curriculum.			
Year 1 Benchmark: By June 2014, 60% of classroom teachers will demonstrate increased proficiency.			
Year 2 Benchmark: By June 2015, 80% of classroom teachers will demonstrate increased proficiency.			
Year 3 Benchmark: By June 2016, 100% of classroom teachers will demonstrate increased proficiency.			
4b.1 Activities and Implementation Steps	**Timeline**	**Person(s) Responsible**	**Monitoring and Evaluation**
Introduce teachers to ISTE NETS for Students and Teachers.	9/2013 – 9/2016	Classroom teachers, Library media techs	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
Administer teacher assessments on an annual basis to track progress.	Annually	Administrators Teachers	
Schedule trainings in a variety of locations and formats to address educator needs.	2013-2016	Administrators District Tech Committee	
Develop several models of training including peer-to-peer, small group, in-house experts, just-in-time learning, webinars, video streaming, external trainers etc	2013-2016	Administrators, District Tech Committee	
Develop and disseminate information about in-house experts who are willing to train other teachers in specific areas.	2013-2016	Administrators, District Tech Committee	
Provide budget to enroll a team of teachers to attend at least one major multi-day ed-tech conference (for example: CUE, CLMS, NECC) per year. Teachers would share out information.	2013-2016	Administrators Superintendent Teacher Leaders	
Promote no-cost/low-cost professional development opportunities offered at the county office and through CTAP statewide.	2013-2016	Administrators District Tech Committee	
Provide teachers with training in the areas of cyberethics (such as copyright, and privacy) and cybersafety as well as in "netiquette" considerations when using email and web publishing.	2013-2014	Library media techs	
Publish and disseminate a calendar of trainings available, including in-house workshops, guest presenters, summer	2013-2016	Exec Asst, Admins, District Tech Committee	

trainings, conferences, county trainings and videoconferencing			
Take advantage of vendor trainings on new state adopted text materials that make use of technology.	Ongoing	Administrators Teacher Leaders Teacher Librarians	
Use a social networking site like Diigo to establish database of educational web sites to be shared and accessed by district teachers, tagged as to grade level and curriculum area.	2013-2016	Administrators Teacher Leaders Library Media Techs	
Establish a database for technology-rich lessons and units of study, tagged as to grade level, curriculum area, application, and technology skill area.	2013-2016	Classroom Teachers, PLCS, District Tech Committee	
Establish a method for teachers to contribute to the above databases.	2013-2016	IT Director Administrators Teachers	
Develop and implement model for grade level sharing of units and peer tutoring. Hold a teacher cyberfair/ technology fair annually where teachers can share examples of technology enriched lesson plans and methods of integration.	2013-2016	Administrators, District Technology Committee	
Provide accessible network storage and online space for teachers to share engaging and motivating technology resources and instructional strategies.	2013-2016	IT Staff Administrators Teachers	
Collaborate at grade level and subject area meetings on development of technology-enriched curricula.	2013-2016	Administrators Teachers	
Evaluation Instruments and Data			
Annual administration of Surveys (Britebytes) and/or District survey data, Analysis of aggregate survey data. Increased proficiency in basic computer skills and curriculum integration, training materials, sign-in sheets and evaluations, examples of technology enriched lesson plans, examples of student work, school websites			

Goal 4b.2: Teachers will make use of electronic tools for student record keeping and assessment.			
Objective 4b.2: By June 2016, 100% of teachers will use a district-wide standardized system for student record keeping and assessment.			
Year 1 Benchmark: By June 2014, 40% of classroom teachers will use a district-wide standardized system for student record keeping and assessment.			
Year 2 Benchmark: By June 2015, 60% of classroom teachers will use a district-wide standardized system for student record keeping and assessment.			
Year 3 Benchmark: By June 2016, 100% of classroom teachers will use a district-wide standardized system for student record keeping and assessment.			
4b.2 Activities and Implementation Steps	**Timeline**	**Person(s) Responsible**	**Monitoring and Evaluation**
Review methods of record keeping and assessment currently in use.	Completed, Ongoing	District Administrative council	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
District-wide adoption of Infinite Campus for record keeping and assessment.	Ongoing	Asst Sup't, Site Administrators	
Implement use of Infinite Campus for gradebook district wide.	2016 - Ongoing	Asst Sup't, Site Administrators	
Develop standardized procedures for recording, storing, and reporting attendance and grades in K-8 schools.	Ongoing	District Administrative Council, teachers	
Provide user input into the new system and assist in communicating key messages throughout the deployment process.	4/2013-6/2014	Data team leaders	
Train teachers in use of electronic rubrics for formative assessment.	June 2014	Teacher Leaders	
Develop and administer surveys to determine professional development needs to achieve the level of proficiency set out in the above objectives.	2013-2016	Principals, District Tech Advisory Committee	
Provide early adoption training for data team leaders.	Mar 2013	Data vendor, District Admins.	
Schedule district and site trainings for teachers at 13 sites.	4/2013-6/2016	District Administrative Council, Site PD Teams, Teacher Leaders	
Evaluate effectiveness of programs and practices annually	2013-2016	District Administrative Council, District Tech Committee Data Team Leaders	
4b.2 Evaluation Instruments and Data			
Training materials , workshop schedule, workshop evaluations, training records, log-ins, usage records, site and district reports created with Infinite Campus.			

Goal 4b.3: Administrators and teachers will use School City to improve student achievement through data collection, analysis, reporting, and data-driven decision making.

Objective 4b.3: By June 2016, 100% of administrators and classroom teachers will access and retrieve data for analysis, reporting and data-driven decision-making purposes.

Year 1 Benchmark: By June 2014, 25% of administrators and classroom teachers will access and retrieve data for analysis, reporting and data-driven decision-making purposes.

Year 2 Benchmark: By June 2015, 50% of administrators and classroom teachers will access and retrieve data for analysis, reporting and data-driven decision-making purposes.

Year 3 Benchmark: By June 2016, 100% of administrators and classroom teachers will access and retrieve data for analysis, reporting and data-driven decision-making purposes.

4b.3 Activities and Implementation Steps	Timeline	Person(s) Responsible	Monitoring and Evaluation
Provide School City training for administrators and classroom teachers (reporting on existing data, creating and scoring assessments either manually or by use of standards-aligned item banks).	2013-2016 Ongoing	District & site admins, IT Staff, Teacher leaders.	District administrators and school site administrators will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives
Teach staff to continuously improve through the use of data driven decision-making.	2013-2016 Ongoing	District & site admins, IT Staff, Teacher leaders	
Train administrators and classroom teachers to use scanners and special equipment.	2013-ongoing	IT Staff	
Identify and evaluate data that exists at school sites.	2013-ongoing	Site Principals	
Develop and administer surveys to determine professional development needs to achieve the level of proficiency set out in the above objectives.	Annually	Superintendent, Admin Site Council	
Schedule additional trainings in School City to address administrators' needs.	2013-2016 Ongoing	Site Principals	
Train teachers on use of rubrics as a measure of formative assessment.	2013-2016 Ongoing	Teacher Leaders,	
Make use of School City in PLC groups.	2013-2016 Ongoing	Site Principals	
Evaluate effectiveness of programs and practices.	2013-2016 Ongoing	Superintendent, Site Principals.	

4b.3 Evaluation Instruments and Data

Attendance sheets, logs of usage, percentage of teachers and administrators using School City, Custom Reports, Differentiated instruction attributed to SC, areas of improvement identified by teachers.

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

- Administrators, teachers and administrative staff will include a technology goal in their list of annual goals. Site administrators will evaluate and monitor progress.

- Sign-in sheets, workshop evaluations and examples of teacher uses of technology in curriculum will be used by the District Technology Commitee to track professional development in the district and to monitor how well the training is implemented into daily instruction.

- Teachers will complete the surveys of technology proficiencies annually. Results will be used to identify areas of training needed.

- As indicated in the Monitoring column of the goal tables in Section 4b, the site Technology Specialists and school Site Administrators will track the development and implementation of all professional development activities and accomplishments monthly and report progress at regular District and Site administration and technology meetings.

- Modifications to technology plan activities will be made as needed in order to insure that the District meets or exceeds measurable objectives.

- Annually, the District Technology Committee will review summary data and make adjustments to Single Plans for Student Achievement, and District Technology Plans, as well as provide data analysis for the Superintendent and the Board of Trustees.

5. INFRASTRUCTURE

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 (sections 3 & 4) of the plan

Berryessa School District has 10 elementary schools and 3 middle schools. We have a student population of about 8,000 students and approximately 1,500 computers for students and administrators. Over 95% of the computers in the district are currently virtualized.

Infrastructure

The Berryessa Union School District has a well-designed network infrastructure that supports the curriculum and professional development components of its technology plan.

- Each of the District's 13 school site is connected to the district office via Opt-E-Man fiber optic Wide Area Network (WAN). 12 of the sites are connected at 250Mbps while Sierramont Middle School is connected at 600Mbps. The maintenance office is connected off of Piedmont Middle School via 1Gbps fiber.
- The District Office is connected to the Santa Clara County Office of Education at 1Gbps for Internet and K12HSN access.
- Each school site has been modernized with fiber backbone cabling currently running at 1Gbps and cat5e cabling to the classroom. 1Gbps POE switches provide connectivity for VoIP phones, Wireless Access Points and Desktop computers. Additional switch port capacity is required to support adding Access Points and hardwired computers.
- 1 Wireless Access point provides coverage for 3-4 classrooms district wide, capable of supporting between 8-10 wireless devices per classroom.

Hardware

- The district currently provides a virtual desktop environment for all teachers, staff and student computers. Schools are responsible for their own technology purchases and support for student classroom computers and computer labs.
- The district runs a variety of operating systems, primarily Windows XP for office staff, student computers and teachers with some schools running MacBooks and iMacs. iPads have been increasing in numbers both as student devices and as teacher devices.
- The majority of computer hardware in the district is greater than four years old.
- Most classrooms have printers and the district is moving away from USB printers to network printers.
- Projector availability varies by school. Some schools have interactive projectors in each classroom while others have projectors available for checkout to

teachers on an as needed basis.
- Document camera availability also varies widely by school site.
- Audio systems are not currently provided in classrooms. Desktop speakers are used by teachers to provide sound when needed.

Software

All software purchases must meet a minimum set of standards consistent with the California Learning Resource Network (CLRN), as well as the needs and standards of the Berryessa Union School District. Web based, open standard software options are preferable to client/server and standalone solutions. The district will evaluate Free and Open Source software options when available. The district coordinates purchasing of site and district licenses to obtain the best values. District software licenses include:

- District license for Microsoft Office 2003/2010
- Insignia for School Libraries
- Infinite Campus District License
- School City district license
- ST Math Limited Site Licenses
- Accelerated Reader
- Accelerated Math
- Blackboard Connect
- Licenses for ILIFE and IWORK (Apple Computer) – mobile carts
- Limited user licenses for Photoshop, DreamWeaver
- DynEd – Let's Go! for EL students
- Imagine Learning
- Read Naturally Pro
- QSS Software
- With BUSD's Intranet model (an internal Internet), more and more applications are becoming networked and web-enabled.

Technical Support Needs

The district provides a web-based help desk to assist users with general technology problems. As technology integration expands to meet common core and 21st Century Learning, support requirements will increase. As more students make use of the network, additional management to support common tasks such as printing, multimedia and network access will be required. As more instruction becomes dependent on information technology and internet access, reliability and support response times will become even more critical.

The MIS Department is currently comprised of five (5) FTE staff members: one network engineer, one PC technician, one SIS Clerk, one SIS Specialist and one Director of MIS.

- The PC Technician is responsible for most issues/problems at the local sites involving classroom and teacher computers, printers, phones and general technical issues.

- The Network Engineer is responsible for all network and infrastructure performance and maintenance issues that affect the district office as well as all of the school sites.

- The SIS Clerk is responsible for inputting centralized student registration, assisting school clerks with SIS issues and ensuring accurate student information is maintained in the SIS.

- The SIS Specialist is responsible for SIS operation, student data reporting, SIS training and master scheduling as well as supporting school administration, EdServices and Business Services data requests.

- The Director of MIS is responsible for Windows, Database, Storage Area Network and Virtual Desktop Systems Administration, as well as EdTech training and leading various technology initiatives and committees.

Tech Support Response Time

The average response time depends on factors, internal and external, project load and time of year. However, the technology team has a target goal of repair anywhere between two and five days, excluding exceptional circumstances outside the team's control. According to the district help desk system, trouble ticket resolution time is within 2-5 days.

District support staff, whenever possible, prioritize support of classroom instruction ahead of other support duties to insure that instruction is the primary focus of technology support in the district.

Mandates upon districts to report ever increasing amounts of data to the state adversely affect direct classroom support. Additionally, support to classroom instruction is compromised if a network outage or other major system complication occurs. The district will need to add support staff as technology becomes more integrated into instruction. Additional site tech support as well as Technology Integration support in the classroom will be required. The MIS department staffing levels reflect a minimal support level for technology within the district. Providing adequate support for classroom technology will also require classroom support for integrating technology into instruction.

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

Infrastructure Needs: District infrastructure is currently insufficient to meet the goals in the curriculum and professional development sections of the plan in the areas of wireless capacity, future bandwidth needs and long term system affordability, supportability and sustainability.

As part of the Facilities Master plan being developed for the district, classroom technology needs, 21st Century teaching and learning environments and sustainable infrastructure are being evaluated throughout the district. Currently the district is in the process of shifting to more manageable and affordable systems by leveraging hosted services (cloud based) and seeking affordable solutions with low management overhead and minimal annual support costs. The following are identified infrastructure needs to support the plan:

- One Access Point per classroom with Cat6 wiring and sufficient POE+ switch ports to support 802.11AC.
- Hosted VoIP to replace existing on-premise hardware.
- Upgade Web Filter to support YouTube EDU, SafeSearch and granular student web filtering.
- Replace UPS Battery Backup systems and increase run time.
- Replace End Of Life Server Hardware.
- Replace the offsite backup service when it expires..
- Increase WAN connection speeds while reducing annual recurring costs as existing contracts expire.
- Upgrade the Backbone to 10Gbps.
- Internet Bandwidth upgradeto 2Gbps.
- Implement Account Automation and Identity Management
- Implement a District wide Learning Management Platform

Hardware Needs: District computers are currently insufficient to meet the goals in the curriculum and professional development sections of the plan. A comprehensive long term support model and budget should be developed to ensure teachers and students have access to up to date computing resources.

- Purchase a laptop and projector for every teacher.
- Install 2-3 computer labs per site to support Smarter Balances Assessment Consortium testing (SBAC).
- Replace all Staff Windows XP system with Windows 7 or Mac OS X prior to April 2014.

- Provide each classroom:
    - An LCD projector or other Large Format Display (LFD) device
    - Capability to interact with the LFD using a tablet or wireless device (ie. AppleTV and iPad)
    - VoIP phone for communication
- Increase Student access to technology through the deployment of mobile carts, 1:1 computing, 1:any computing and increased computer labs.

Software Needs: The District will migrate more services towards hosted and cloud based solutions that support mobile platforms, cross platform user experiences and low management overhead.

- Implement District Wide Google Apps for Education student and staff accounts.
- Upgrade Microsoft Office 2003 for staff and administrators.
- Implement web based instructional software
- Develop a clear support system, policies and procedures for Mobile Apps deployment.

5c. List of clear annual benchmarks for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components.

Tech Area	Benchmarks	Benchmarks	Person(s) Responsible	Monitoring and Evaluation
Infrastructure	Upgrade to the Hosted Voice Over IP System (VoIP)	2013/2014	IT Staff	District administrators, school site administrators and IT Staff will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable
	Provide minimum of 2 labs per School site for Common Core testing	March 2015	IT Staff	
	Upgrade existing wireless system to support BYOD or 1:1 student computing	2013-2014	IT Staff	
	Upgrade Web Filter and Firewall solutions to better support BYOD and 1:1 student computing	2013	IT Staff	
	Replace Servers	2016	IT Staff	
	Conduct an annual review of network bandwidth requirements at the classroom level, to determine whether the wired and wireless network equipment will have adequate bandwidth for the coming year.	Annual	IT Staff	
	Migrate from Exchange Mail Server to Hosted Google	2013	IT Staff	

	Apps for Education			objectives
	Purchase ST Math licenses to expand the program for students	2013	School Sites	
Hardware	Migrate Teachers to Laptops	2013	IT Staff	
	Migrate Staff to Desktops	2013	IT Staff	
	Install two mobile computer labs per school site	2015	IT Staff	
	Develop a UPS upgrade and replacement plan	2014	IT Staff	
Software	Create a mobile device and application Policy	2013	IT Staff	
	Maintain subscriptions and licensing to online products.	Annual	IT Staff, Site Administrators	
	Conduct an annual evaluation by a committee of teachers and tech support personnel of open source and/or web-based alternatives to commercial software and operating systems, especially in the areas of assistive technology, collaboration, note taking, creativity, critical thinking, expression, and other core student competencies.	Annual	District Technology Committee	
	Decide on software purchases each spring and purchase licenses before the end of the fiscal year, so that computer images can be created and tested in early summer	Annual	IT Staff, Site administrators	
	Create a secure, searchable operations manual for all system administration tasks with details of software configuration, software licenses, accounts and passwords, and instructions for second- and third-tier tech support (such as school office personnel) to use in case of emergency.	2013-2016	IT Staff	

5d. Description of the process that will be used to monitor whether the annual benchmarks including roles and responsibilities

District administrators, school site administrators and IT staff will track the development and implementation of all activities and accomplishments through monthly progress reports at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives

The District Technology Committee will support the monitoring and evaluation of this section of the plan by analyzing the evaluation data described in Section 5c. They will make recommendations on improving the implementation of plan infrastructure benchmarks.

Realizing that all equipment purchases will be made according to budgetary constraints for that year, a meeting with the District Technology Committee and the Assistant Superintendent of Education will take place annually to establish the funding priorities and to map out a plan.

The IT Department will support the monitoring and evaluation of this section of the plan by:

- Monitoring and evaluating help desk records and purchase requests
- Monitoring and evaluating District survey results to measure progress on benchmarks district-wide
- Monitoring input from teachers
- Monitoring and evaluating State technology survey results

Review of progress will be reported annually to the Superintendent and Board of Education.

6. FUNDING & BUDGET

6a. List established and potential funding sources

E-Rate
E-Rate is the commonly used name for the Schools and Libraries Program of the Universal Service Fund, which is administered by the Universal Service Administrative Company (USAC) under the direction of the Federal Communications Commission (FCC). The program provides discounts to assist most schools and libraries in the United States (and U.S. territories) to obtain affordable telecommunications and Internet access. It is one of four support programs funded through a Universal Service fee charged to companies that provide interstate and/or international telecommunications services.

The program allows for subsidy of expenditures for these categories of E-Rate Services:

- Plain old telephone service (POTS)
- Voice-over IP (VOIP) Telephony
- Wireless data services such as Blackberry
- Long Distance telephone services
- Email, automated voice notification, and safety related services
- Internet access and Internet services, including fiber-optics (Opt-E-Man)
- Other SLD services congruent with implementation of the current technology plan.

Paragraph 59 of the Schools and Libraries Fifth Order, states that the Universal Service Administrative Company (USAC) has "been treating technology plans approved under the [United States] Department of Education's Enhancing Education Through Technology (EETT) as acceptable technology plans subject to one qualification. Consistent with the [Federal Communications] Commission requirement that program applicants demonstrate that they have the necessary resources required to utilize E-Rate discounts, USAC has required that the EETT technology plans be supplemented by an analysis that indicates that the applicant is aware of and will be able to secure the financial resources it will need to achieve its technology aims, including technology training, software, and other elements outside the coverage of the Commission's support program."

The E-Rate addendum is maintained separately by the district and not required for inclusion in the technology plan.

Other potential funding sources:

Fund 5 – Routine Maintenance and Repair

Fund 40 – Capital Facilities Improvement Project funding for the Berryessa Union School District.

Parcel Tax (Measure K) - The measure creates a $79 dollars per parcel tax annually for the next eight (8) years. Some of these funds will be applied to technology.

Silicon Valley Education Foundation provides individual teacher grants of $500-$1,000 that support innovation in the classroom.

6b. Estimate implementation costs for the term of the plan (3-5 years)

Due to the State budget crisis and resulting fiscal constraints in Education, the following is a *proposed* budget and that may be subject to further modification, as funding streams are adjusted.

Component	Year 1	Year 2	Year 3	Possible Funding Source
Curriculum				
Imagine Learning	Site Funded	Site Funded	Site Funded	General Fund, eRate Site funds are used for Accelerated Reader and Accelerated Math. ST Math is site-funded
Catapult CMS	18000	18000	18000	
Insignia Software (Lib Sys Maint)	12974	12974	12974	
Infinite Campus Yearly Licensing Fees	$80,250	$80,250	$80,250	
Blackboard Connect	$29588	$29588	$29588	
Accelerated Reader	Site-funded	Site-funded	Site-funded	
Accelerated Math	Site-funded	Site-funded	Site-funded	
ST Math	Site-funded	Site-funded	Site-funded	
Totals	$140,812	$140,812	$140,812	
Professional Development				
Infinite Campus trainer of trainers	5,000	3,000	3,000	Measure K
Using Data management and formative assessments to close the achievement gap	25,000	25,000	25,000	Economic Impact Aid
Certification training	7,500	7,500	7,500	General fund
Totals	$37,500	$37,500	$37,500	

Component	Year 1	Year 2	Year 3	Possible Funding Source
Infrastructure				
Hosted VoIP migration	$45,000	$45,000	$45,000	ERATE, General Fund
District Server upgrades and software support contracts	$135,000	$135,000	$135,000	General Fund
Opt-E-Man fiber optic installation/yearly costs	$670,000	$450,000	$450,000	ERATE, General Fund
Totals	$850,000	$630,000	$630,000	
Hardware				
400 Laptops (Annual Lease Cost)	$125,000	$125,000	$125,000	Categorical, General Fund
Student Computer Labs for CCSS assessment (Annual Lease Cost)	$80,000	$80,000	$80,000	Categorical, General Fund, Measure K
Staff Desktops (Annual Lease)	$15,000	$15,000	$15,000	Categorical, General Fund, Measure K
Totals	$225,000	$225,000	$225,000	
Electronic Resources				
Google Apps Vault	9000.00	9000.00	9000.00	General Fund, Fund 5 (Routine Maintenance & Repair, Measure K, School & Library Improvement Program (SLIP)
Anti Virus software	7800.00	7800.00	7800.00	
Backup Services	45,000.00	35,000.00	35,000.00	
Network Services	20000.00	20000.00	20000.00	
Helpdesk (Mac's Design)	700.00	700.00	700.00	
Web Filter/LMS	5000.00	5000.00	5000.00	
SIS Custom Programming	1000.00	10000.00	10000.00	
School Vision	4200.00	4200.00	4200.00	
Analytic	23492.15	23492.15	23492.15	
Blackboard Connect	29588.00	29588.00	29588.00	
SCCOE - RTC				
QSS (software)	150802.30	150802.30	150802.30	
Network Services	18150.00	18150.00	18150.00	
e-Document Management	10000.00	10000.00	10000.00	

Totals	$324,732.45	$314,732.45	$314,732.45	
Personnel				
MIS Dept	$415,940	$416,356	$416,772	General Fund Measure K Economic Impact Aid
Data/Assessment	$123,500	$123,624	$123,747	
Media Tech	$462,000	$462,462	$462,924	
Site Support	$15,690	$85,706	$165,721	
Totals	$1,017,139	$1,088,148	$1,169,114	

E-RATE INFORMATION

FOR
2013-2016 TECH PLAN

E-RATE EXPENSE BREAK DOWN:

ESTIMATE FOR 2013-2014

SERVICE	**E-RATE DISCOUNT = 58%**	**GENERAL FUND**	**TOTAL**
TELEPHONE SERVICES	$81,200	$58,800	$140,000
DIGITAL HIGH SPEED NETWORK	$388,600	$281,400	$670,000
WEBSITE SERVICES (DNA) Service not 100% e-rate eligible	$6,720.00	$9,280	$16,000
TOTALS	**$476,520**	**$349,480**	**$826,000**

ESTIMATE FOR 2014-2015

SERVICE	**E-RATE DISCOUNT = 58%**	**GENERAL FUND**	**TOTAL**
TELEPHONE SERVICES	$81,200	$58,800	$140,000
DIGITAL HIGH SPEED NETWORK	$261,000	$189.000	$450,000
WEBSITE SERVICES (SCHOOL WIRES) Service not 100% e-rate eligible	$6,720.00	$9,280	$16,000
TOTALS	**$348,920**	**$257,080**	**$606,000**

ESTIMATE FOR 2015-2016

SERVICE	**E-RATE DISCOUNT = 68%**	**GENERAL FUND**	**TOTAL**
TELEPHONE SERVICES	$81,200	$58,800	$140,000
DIGITAL HIGH SPEED NETWORK	$261,000	$189,000	$450,000
WEBSITE SERVICES (SCHOOL WIRES) Service not 100% e-rate eligible	$6,720.00	$9,280	$16,000
TOTALS	**$348,920**	**$257,080**	**$606,000**

6c. Description of the district's replacement policy for obsolete equipment

The current district policy is to continue to utilize equipment until it stops working. The district is developing a sustainable support model with a goal of leasing teacher, staff and student computers. Leasing will provide for a timely hardware and software refresh and ensure everyone has access to modern, functional technology in support of 21st Century Learning and Common Core state standards..

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 Director of MIS, Director of Finance, Assistant Superintendent of Business, Superintendent, and the Finance Committee of the Board of Trustees all monitor the annual technology budget. The Business Manager and school administrators review technology funding opportunities each year as the Governor's office proposes, revises and signs the State Education budget. Technology funding is coordinated district-wide; Site Principals may request specific programs or adjustments but these are considered as part of an overall District budget.

District technology committee members regularly receive notification of grant opportunities. The Director of MIS, Site Principals and District Technology Committee members will review corporate grant opportunities and encourage and support grant writing by teachers throughout the school year. In March or April of each year the District Technology Committee reviews the expenditures listed in the Technology Plan for the next fiscal year, and presents a summary request to the Board of Trustees, adjusting for enrollment increases and other factors that may not have been foreseen when the plan was written.

The district will take advantage of cost savings through purchase of district and site vs. individual licenses. Wherever possible, the district will make use of State purchasing power through Cal-Save. The Technology Coordinator will be the lead contact for E-Rate and other governmental grants.

During April, May and June of each year, the Board's Finance Committee reviews technology spending-requests as part of the process of setting an overall budget that is formally adopted in June. If adjustments to technology spending become necessary due to increases or decreases in available funds granted by the Board of Trustees, the District Technology Committee will determine what adjustments to this plan should be made.

7. MONITORING & EVALUATION COMPONENT

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

Monitoring of the district technology plan has been previously described in individual components of this plan. The BUSD educational technology plan is meant to be a "living" document that will guide district decision making over the three-year duration of the plan. It will be monitored, evaluated and revised by the Technology Committee as needed. Any revisions to the plan will be presented to the Board of Trustees annually.

The District Technology Committee will provide overall coordination and oversight of the technology planning process. Coordination will include the implementation of goals and objectives set forth in this plan to integrate technology to meet core curriculum goals.

The Director of MIS and technology support staff will provide information and oversight to guide the Curriculum, Professional Development and Infrastructure components of this plan, while the District Business Manager, Superintendent and Board Finance Committee will provide coordination and oversight of technology funds and budget issues.

School Principals will provide site-based updates on technology plan implementation and needs; site based training support; input on efforts, outcomes and needs to support implementation of the plan to meet district curricular goals.

Every effort will be made to collect relevant measurable objective data that can be documented, referenced and reviewed, as outlined in the implementation step tables' Monitoring column and in the Evaluation section attached to each goal in Sections 3-5. To create a view of the overall impact of the Technology Plan data will be drawn from the following sources (and others):

- Academic performance data
- Sociological data
- CBEDS data
- CELDT Data
- Surveys of teachers, students and parents
- Classroom observations
- Database of technology integration activities and lesson plans
- Local benchmarks in School City
- Correlations to State or National standards

- Documentation of staff development plans and objectives
- Professional development evaluation data
- Correlations to research
- Email and website traffic analysis
- Database of student- and teacher-created electronic resources
- Technology inventory data
- Help desk ticket records
- Total cost of ownership analysis

Responsibility for the evaluation of the overall effectiveness of this plan on teaching and learning will be assigned to many stakeholders.

- Individual teachers will provide data by correlating the use of technology with student outcomes using School City or other measures.
- Grade Level and Curriculum teacher groups at each school will analyze data for strengths and weaknesses in content and grade-specific areas, as part of the District's professional learning communities initiative.
- Site Administrators will examine data at the site, grade level, subject, teacher and student levels, and use School City information, teacher observations and other data to determine where technology use has been effective and where it has not. Principals will focus on where intervention is needed and which interventions have been successful in the past.
- The District Technology Committee will gather data from these and other stakeholders to identify areas in which technology may have positively affected results and areas in which technology might support future improvement. The Technology Committee will publish its findings in annual reports to the Board of Trustees and make recommendations for the effective use of technology to support curricular goals, and amend the Technology Use Plan as necessary.

School administrators and the District Technology Committee will communicate the overall progress and impacts back to the stakeholders, so that positive impacts can be maximized. Communication may occur via meetings of the Board of Trustees, staff meetings, media and press releases, parent education workshops, tours of the district and articles posted on district websites and/or distributed in electronic and print newsletters.

7b. Schedule for evaluating the effect of plan implementation

The District's Educational Technology Advisory Committee will serve as the primary evaluator of the technology plan and will dedicate at least two of its meetings each year to review progress in meeting benchmarks for each goal and objective in Sections 3-5.

- Student achievement results as measured by the California Standards Tests, the California English Language Development Test and the Simple Assessment of student NETS will be reported to the Board of Trustees annually.
- Teacher technology proficiencies will be assessed annually and the data will be used to plan professional development.
- Parent surveys will be administered and reviewed annually.
- The Technology Committee semi-annual review will highlight action items for teachers and administrators that remain to be carried out.
- At a more detailed level, scheduled staff meetings at each school site will have at least one agenda item per meeting to discuss the progress of one or more technology plan implementation steps or goals.
- Discussions that raise significant problems or successes will be shared with the larger community through discussion time at school staff meetings, at Site Council meetings, or at weekly Site Principal meetings of the Superintendent and Site Principals.

The technology advisory committee will prepare recommendations for modifications to the plan and present them to the Board of Trustees annually. After review and comment on these recommendations the plan will be updated on an annual basis. When mid-course corrections are necessary, the District Technology Committee and Site Administrators will have the authority to request, approve and allocate resources to effect change in technology initiatives.

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

The Superintendent and the Director of MIS will prepare a formal implementation status report on the progress toward the plan goals and the completion of activities and will submit the report and budget recommendation to the Superintendent and the Board of Trustees on an annual basis.

Other District Advisory Committee members will make occasional presentations and board reports during the year highlighting different aspects of plan implementation.

Reports at all board meetings will be posted online and disseminated to the local community. In addition, administrators, teachers, students, parents and community members will be asked for feedback and comments on technology use through annual surveys, and the results of these surveys will be included in articles posted on district websites and/or distributed in electronic and print newsletters.

8. ADULT LITERACY PROVIDERS

8a. Description of Adult Literacy programs

The Berryessa Union School District has offered a community-based English tutoring program (CBET) to give parents and adult community members the opportunity to learn English as a Second Language through a fun and interactive curriculum in previous years but due to the State budget crisis, the program is currently on hiatus. CBET classes help develop the skills for parents to help their children do better in school. Parents receive free materials designed to assist in the acquisition of English in an effort to raise the general level of English language knowledge in the community. In the past year, there were 100 participants at our school sites with beginning levels two nights per week with 10 to 12 weeks as a session. Parents who have children enrolled in Berryessa District qualified for participation. They are encouraged to learn English and then extend that learning to the home with their children.

Berryessa schools are feeder schools into the East Side Union High School District, one of California's largest school districts with 24,700 students. East Side USD offers an Adult Education Program at two sites in San Jose: Independence Adult Center and Overfelt Adult Center. Classes in adult literacy, citizenship, computer literacy, career and technical applications are available.

The Berryessa Community Center also provides weekly technology literacy classes for senior adults. The classes are held in the district technology training center.

9. EFFECTIVE RESEARCH-BASED METHODS & STRATEGIES

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

The goals, objectives, benchmarks and timelines presented or described in the previous sections of the plan are derived from proven strategies and methods for student learning, teaching and technology management and are based on relevant research and effective practices.

Our technology plan lists clear goals and strategies for integrating technology into the curriculum to improve student learning. The following relevant research was examined and integrated into our plan. The research we selected emphasizes best practices for technology integration in the curriculum and important factors that contribute to successful staff development.

Berryessa Union School District agrees that technology should be integrated into the curriculum at all levels in order to improve student achievement. Technology improves student performances when the application directly supports the curriculum objectives being assessed. Alignment of project or lesson content with state content standards is an important first step in infusing technology into the curricula.

Relevant Research that supports curricular and professional development goals.	
Curriculum	Studies of ST Math usage have shown that the Mind Institute's methods effectively reduce language barriers to learning and greatly increase the achievement in mathematics for a wide variety of student populations (Graziano, Peterson & Shaw, 1999; Martinez et al., 2005). ST Math has been successfully piloted at one of our Berryessa elementary school sites and resulted in a 24% gain in math proficiency by the students. Student use of ST Math will be expanded during the course of this tech plan.
	Boster and Meyers examined third and eighth grades students in three areas of study: science, social studies and mathematics. Students who received instruction aided by *Discovery Streaming* showed as increase in achievement over the control group. "A *Report on the Effect of the United Streaming Application on Educational Performance*" (Boster and Meyers, 2002, 2004)
	Effects of Video-Based and Applied Problems on the Procedural Math Skills of Average and Low-Achieving Adolescents, *Journal of Special Education Technology*, 18(2), 5-22. Bottge, B.A. (2003).

	A survey of 465 teachers in California resulted in 92% affirming that the starting point in infusing technology into the curriculum is having information about the specific content of a program or use of an application that aligns with state- adopted curriculum standards. A number of respondents indicated that an online resource that profiles electronic learning resources with the specific skills and knowledge in areas that align with the content standards would facilitate the selection of programs enabling the integration of technology with the curriculum (Cradler & Beuthel, 2001)
	The CEO Forum on Education and Technology (2001) studied the impact of technology over a five-year period to inform educational decision makers about effective uses of educational technology. The CEO Forum report recommends that schools develop strategic technology and educational plans that ensure alignment across the curriculum, learning standards and objectives. "Technology can have the greatest impact when integrated into the curriculum to achieve clear, measurable educational objectives." The CEO Forum included 21st Century Skills as a "new set of skills necessary to prepare students for life and work in the digital age. These skills include digital literacy, inventive thinking, effective communication and high productivity abilities." *(CEO Forum on Education and Technology, June 2001).*
Curriculum	Research shows that high quality formative assessment does have a powerful impact on student learning. Black and William report that studies of formative assessment show an effect size on standardized tests of between 0.4 and 0.7, which is larger than most known educational interventions. Formative assessment is particularly effective for students who have not done well in school, thus narrowing the gap between low and high achievers while raising overall achievement. ***Inside the Black Box: Raising Standards Through Classroom Assessment*** *P Black, D William - Phi Delta Kappan, 1998*
	Technology does provide a small, but significant, increase in learning when implemented with fidelity. While this statistic is encouraging, the real value lies to research lies in the identification of those technology interventions that get sufficiently positive results to warrant the investment. Most educators are looking for the value proposition that will significantly advance learning, teaching, and school system efficiencies. Taking advantage of these leverage points requires serious review of specific research studies that specifically address the needs and challenges of schools and serious attention paid to leadership development, professional development for teachers, school culture, curricular redesign, and teacher preparation. ***Technology In The Schools: What the Research Shows*** Metiri Group – commissioned by Cisco System 2006

	A study of the attitudes of Internet-using public middle and high school students toward "use of the Internet for schoolwork and the broader learning that can take place online." shows that students want to be assigned activities that are relative to their daily lives and they want access to computers beyond that available in computer labs and only at specific times of the day. ***The digital disconnect: The widening gap between internet-savvy students and their schools. (2003)*** *Levin, D, & Arafeh, S., American Institutes for Research for Pew Internet & American Life Project.*
	Robert Marzano identified nine essential strategies that are most likely to improve student achievement across all content areas and across all grade levels. Using educational technology applications and resources, we can build on these recommendations and advance student learning through inquiry, collaborative projects, games, and other activities that will capture student interest and make school exciting and meaningful. We can help students take notes, summarize content and make comparisons and we can use technology to engage them in cooperative learning. We can also reinforce their efforts through formative assessment, feedback and recognition. ***Using Technology with Classroom Instruction that Works,*** *Howard Pitler, Elizabeth R. Hubbell, Matt Kuhn, Kim Malenoski, Published by ASCD, 2007*
Professional Development	An extensive report from WestEd examines many studies related to educational technology and school reform. Several key factors are identified as crucial elements for successfully using technology: o Technology is best used as one component in a broad-based reform effort o Teachers must be adequately trained to use technology o Teachers may need to change their beliefs about teaching and learning o Technological resources must be sufficient and accessible o Effective technology use requires long-term planning and support o Technology should be integrated into the instructional framework These key elements are addressed in several places in our BUSD Technology Plan. They are best found in the areas aligning technology with curricular and professional

	development goals emphasizing technology-enhanced, standards-based curricular lessons and units. ***The Learning Return On Our Educational Technology Investment: A Review of Findings from Research**, WestED (Ringstaff and Kelley, June 2002)*
	The greatest gains in student achievement occurred when teachers were trained in the use of technology (Schacter, 1999). Intensive and ongoing staff development that provides opportunities for modeling, practice, and reinforcement of technology use with curricula should be linked to curriculum goals and objectives from the onset of technology implementation efforts (Roschelle et al.,2000). Being mentored by an experienced teacher who is proficient with technology is a strategy that builds teacher confidence and interest in technology (Zhao, Pugh, Sheldon, & Byers, 2002). Extensive research conducted by the Office of Technology Assessment reports that "Districts may be well advised to use multiple training and support strategies tailored to the educational goals of the local site" (OTA, 1995).

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 (particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources)

Berryessa students and teachers will integrate technology into everyday classroom instruction in support of the Common Core state standards. Strategies such as flip teaching and blended learning will be supported in classrooms with best practices shared across the district. Blogs, wikis, YouTube videos and other tools will be used to connect Berryessa students to other students around the world.

Appendix A: ISTE Technology Standards for Students and Teachers

The ISTE National Educational Technology Standards (NETS•S) and Performance Indicators for Students

1. **Creativity and Innovation**
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:
   - **a.** apply existing knowledge to generate new ideas, products, or processes.
   - **b.** create original works as a means of personal or group expression.
   - **c.** use models and simulations to explore complex systems and issues.
   - **d.** identify trends and forecast possibilities.

2. **Communication and Collaboration**
   Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:
   - **a.** interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
   - **b.** communicate information and ideas effectively to multiple audiences using a variety of media and formats.
   - **c.** develop cultural understanding and global awareness by engaging with learners of other cultures.
   - **d.** contribute to project teams to produce original works or solve problems.

3. **Research and Information Fluency**
   Students apply digital tools to gather, evaluate, and use information. Students:
   - **a.** plan strategies to guide inquiry.
   - **b.** locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
   - **c.** evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
   - **d.** process data and report results.

4. **Critical Thinking, Problem Solving, and Decision Making**
   Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:
   - **a.** identify and define authentic problems and significant questions for investigation.
   - **b.** plan and manage activities to develop a solution or complete a project.
   - **c.** collect and analyze data to identify solutions and/or make informed decisions.
   - **d.** use multiple processes and diverse perspectives to explore alternative solutions.

5. **Digital Citizenship**
   Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:
   - **a.** advocate and practice safe, legal, and responsible use of information and technology.
   - **b.** exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
   - **c.** demonstrate personal responsibility for lifelong learning.
   - **d.** exhibit leadership for digital citizenship.

6. **Technology Operations and Concepts**
   Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:
   - **a.** understand and use technology systems.
   - **b.** select and use applications effectively and productively.
   - **c.** troubleshoot systems and applications.
   - **d.** transfer current knowledge to learning of new technologies.

Profiles

for Technology (ICT) Literate Students

A major component of the NETS Project is the development of a general set of profiles describing technology (ICT) literate students at key developmental points in their precollege education. These profiles are based on ISTE's core belief that all students must have regular opportunities to use technology to develop skills that encourage personal productivity, creativity, critical thinking, and collaboration in the classroom and in daily life. Coupled with the standards, the profiles provide a set of examples for preparing students to be lifelong learners and contributing members of a global society.

The profiles highlight a few important types of learning activities in which students might engage as the new NETS•S are implemented. These examples are provided in an effort to bring the standards to life and demonstrate the variety of activities possible. Space limitations and the realities of the constantly evolving learning and technology landscapes make it impossible to provide a comprehensive collection of examples in this document, and consequently, students and teachers should not feel constrained by this resource. Similarly, because this represents only a sampling of illuminating possibilities, the profiles cannot be considered a comprehensive curriculum, or even a minimally adequate one, for achieving mastery of the rich revised National Educational Technology Standards for Students. Educators are encouraged to stay connected to the ISTE NETS Refresh Project and contribute their best examples to expand this resource.

The profiles are divided into the following four grade ranges. Because grade-level designations vary in different countries, age ranges are also provided.

- Grades PK–2 (ages 4–8)
- Grades 3–5 (ages 8–11)
- Grades 6–8 (ages 11–14)
- Grades 9–12 (ages 14–18)

It's important to remember that the profiles are *indicators of achievement at certain stages* in primary, elementary, and secondary education, and that success in meeting the indicators is predicated on students having regular access to a variety of technology tools. Skills are introduced and reinforced over multiple grade levels before mastery is achieved. If access is an issue, profile indicators will need to be adapted to fit local needs.

The standards and profiles are based on input and feedback provided by instructional technology experts and educators from around the world, including classroom teachers, administrators, teacher educators, and curriculum specialists. Students were also given opportunities to provide input and feedback. In addition, these refreshed documents reflect information collected from professional literature.

Profile

for Technology (ICT) Literate Students Grades PK–2 (Ages 4–8)

The following experiences with technology and digital resources are examples of learning activities in which students might engage during PK–Grade 2 (ages 4–8):

1. Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (1, 2)
2. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1, 3, 4)
3. Engage in learning activities with learners from multiple cultures through e-mail and other electronic means. (2, 6)
4. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (1, 2, 6)
5. Find and evaluate information related to a current or historical person or event using digital resources. (3)
6. Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. (1, 3, 4)
7. Demonstrate the safe and cooperative use of technology. (5)
8. Independently apply digital tools and resources to address a variety of tasks and problems. (4, 6)
9. Communicate about technology using developmentally appropriate and accurate terminology. (6)
10. Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and Web sites. (6)

The numbers in parentheses after each item identify the standards (1–6) most closely linked to the activity described. Each activity may relate to one indicator, to multiple indicators, or to the overall standards referenced.

The categories are:

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving, and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

Profile

for Technology (ICT) Literate Students Grades 3–5 (Ages 8–11)

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 3–5 (ages 8–11):

1. Produce a media-rich digital story about a significant local event based on first-person interviews. (1, 2, 3, 4)
2. Use digital-imaging technology to modify or create works of art for use in a digital presentation. (1, 2, 6)
3. Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3, 4)
4. Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6)
5. Identify and investigate a global issue and generate possible solutions using digital tools and resources. (3, 4)
6. Conduct science experiments using digital instruments and measurement devices. (4, 6)
7. Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support. (4, 6)
8. Practice injury prevention by applying a variety of ergonomic strategies when using technology. (5)
9. Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5, 6)
10. Apply previous knowledge of digital technology operations to analyze and solve current hardware and software problems. (4, 6)

The numbers in parentheses after each item identify the standards (1–6) most closely linked to the activity described. Each activity may relate to one indicator, to multiple indicators, or to the overall standards referenced.

The categories are:

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving, and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

Profile

for Technology (ICT) Literate Students Grades 6–8 (Ages 11–14)

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 6–8 (ages 11–14):

1. Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1, 2)
2. Create original animations or videos documenting school, community, or local events. (1, 2, 6)
3. Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1, 4)
4. Participate in a cooperative learning project in an online learning community. (2)
5. Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3)
6. Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. (3, 4, 6)
7. Select and use the appropriate tools and digital resources to accomplish a variety of tasks and to solve problems. (3, 4, 6)
8. Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5)
9. Integrate a variety of file types to create and illustrate a document or presentation. (1, 6)
10. Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4, 6)

The numbers in parentheses after each item identify the standards (1–6) most closely linked to the activity described. Each activity may relate to one indicator, to multiple indicators, or to the overall standards referenced.

The categories are:

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving, and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

The ISTE National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers

Effective teachers model and apply the National Educational Technology Standards for Students (NETS•S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators. Teachers:

1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- **a.** promote, support, and model creative and innovative thinking and inventiveness
- **b.** engage students in exploring real-world issues and solving authentic problems using digital tools and resources
- **c.** promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes
- **d.** model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- **a.** design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
- **b.** develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress
- **c.** customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources
- **d.** provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching

3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- **a.** demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations
- **b.** collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation
- **c.** communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats
- **d.** model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- **a.** advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources
- **b.** address the diverse needs of all learners by using learner-centered strategies and providing equitable access to appropriate digital tools and resources
- **c.** promote and model digital etiquette and responsible social interactions related to the use of technology and information
- **d.** develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools

5. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- **a.** participate in local and global learning communities to explore creative applications of technology to improve student learning
- **b.** exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others
- **c.** evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning
- **d.** contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community

Appendix B – Criteria for EETT Funded Technology Plans

In order to be approved, a technology plan needs to have "Adequately Addressed" each of the following criteria:

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1. PLAN DURATION CRITERION			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
The plan should guide the district's use of education technology for the next three to five years. (For new plan, can include technology plan development in the first year).	Cover, 11	The technology plan describes the districts use of education technology for the next three to five years. (For new plan, description of technology plan development in the first year is acceptable). Specific start and end dates are recorded (7/1/xx to 6/30/xx).	The plan is less than three years or more than five years in length. Plan duration is 2008-11.
2. **STAKEHOLDERS CRITERION** Corresponding EETT Requirement(s): 7 and 11 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Not Adequately Addressed**
Description of how a variety of stakeholders from within the school district and the community-at-large participated in the planning process.	11	The planning team consisted of representatives who will implement the plan. If a variety of stakeholders did not assist with the development of the plan, a description of why they were not involved is included.	Little evidence is included that shows that the district actively sought participation from a variety of stakeholders.

3. **CURRICULUM COMPONENT CRITERIA** Corresponding EETT Requirement(s): 1, 2, 3, 8, 10, and 12 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. Description of teachers' and students' current access to technology tools both during the school day and outside of school hours.	**12-14**	The plan describes the technology access available in the classrooms, library/media centers, or labs for all students and teachers.	The plan explains technology access in terms of a student-to-computer ratio, but does not explain where access is available, who has access, and when various students and teachers can use the technology.
b. Description of the district's current use of hardware and software to support teaching and learning.	**14-17**	The plan describes the typical frequency and type of use (technology skills/information literacy/integrated into the curriculum).	The plan cites district policy regarding use of technology, but provides no information about its actual use.
c. Summary of the district's curricular goals that are supported by this tech plan.	**18**	The plan summarizes the district's curricular goals that are supported by the plan and referenced in district document(s).	The plan does not summarize district curricular goals.
d. 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.	**19-21**	The plan delineates clear goals, measurable objectives, annual benchmarks, and a clear implementation plan for using technology to support the district's curriculum goals and academic content standards to improve learning.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
e. 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.	**22-24**	The plan delineates clear goal(s), measurable objective(s), annual benchmarks, and an implementation plan detailing how and when students will acquire technology skills and information literacy skills.	The plan suggests how students will acquire technology skills, but is not specific enough to determine what action needs to be taken to accomplish the goals.

	Page in Plan	Example of Adequately Addressed	Example of Not Adequately Addressed
f. 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; distinguishing lawful from unlawful downloading and peer-to-peer file sharing; and avoiding plagiarism	**25-29**	The plan describes or delineates clear goals outlining how students will learn about the concept, purpose, and significance of the ethical use of information technology including copyright, fair use, plagiarism and the implications of illegal file sharing and/or downloading (as stated in AB 307).	The plan suggests that students will be educated in the ethical use of the Internet, but is not specific enough to determine what actions will be taken to accomplish the goals.
g. 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: Optional in 2007-08, required July 1, 2008)	**30-32**	The plan describes or delineates clear goals outlining how students will be educated about Internet safety (as stated in AB 307).	The plan suggests Internet safety education but is not specific enough to determine what actions will be taken to accomplish the goals.
h. Description of or goals about the district policy or practices that ensure equitable technology access for all students.	**33**	The plan describes the policy or delineates clear goals and measurable objectives about the policy or practices that ensure equitable technology access for all students. The policy or practices clearly support accomplishing the plan's goals.	The plan does not describe policies or goals that result in equitable technology access for all students.
i. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan to use technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs.	**32-35**	The plan delineates clear goal(s), measurable objective(s), annual benchmarks, and an implementation plan for using technology to support the district's student record-keeping and assessment efforts.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.

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.	**36-39**	The plan delineates clear goal(s), measurable objective(s), annual benchmarks, and an implementation plan for using technology to improve two-way communication between home and school.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
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.	**38-39**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding procedures, roles, and responsibilities.

4. **PROFESSIONAL DEVELOPMENT COMPONENT CRITERIA** Corresponding EETT Requirement(s): 5 and 12 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. **Summary of the teachers' and administrators' current technology proficiency and integration skills and needs for professional development**.	**40-45**	The plan provides a clear summary of the teachers' and administrators' current technology proficiency and integration skills and needs for professional development. The findings are summarized in the plan by discrete skills that include CTC Standard 9 and 16 proficiencies.	Description of current level of staff expertise is too general or relates only to a limited segment of the district's teachers and administrators in the focus areas or does not relate to the focus areas, i.e., only the fourth grade teachers when grades four to eight are the focus grade levels.
b. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan for providing professional development opportunities based on district needs assessment data (4a) and the Curriculum Component objectives (sections 3d through 3j) of the plan.	**45-49**	The plan delineates clear goal(s), measurable objective(s), annual benchmarks, and an implementation plan for providing teachers and administrators with sustained, ongoing professional development necessary to reach the Curriculum Component objectives (sections 3d through 3j) of the plan.	The plan speaks only generally of professional development and is not specific enough to ensure that teachers and administrators will have the necessary training to implement the Curriculum Component.
c. Describe the process that will be used to monitor the Professional Development (Section 4b) goals, objectives, benchmarks and planned implementation activities including roles and responsibilities.	**50**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.

5. **INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE COMPONENT CRITERIA** Corresponding EETT Requirement(s): 6 and 12 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. **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 (sections 3 & 4) of the plan.**	**51-54**	The plan clearly summarizes the existing technology hardware, electronic learning resources, networking and telecommunication infrastructure, and technical support to support the implementation of the Curriculum and Professional Development Components.	The inventory of equipment is so general that it is difficult to determine what must be acquired to implement the Curriculum and Professional Development Components. The summary of current technical support is missing or lacks sufficient detail.
b. **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.**	**55-56**	The plan provides a clear summary and list of the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support the district will need to support the implementation of the district's Curriculum and Professional Development Components.	The plan includes a description or list of hardware, infrastructure, and other technology necessary to implement the plan, but there doesn't seem to be any real relationship between the activities in the Curriculum and Professional Development Components and the listed equipment. Future technical support needs have not been addressed or do not relate to the needs of the Curriculum and Professional Development Components.
c. **List of clear annual benchmarks for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components as identified in section 5b.**	**56-58**	The annual benchmarks are specific and realistic. Teachers and administrators implementing the plan can easily discern what needs to be acquired or repurposed, by whom, and when.	The annual benchmarks are either absent or so vague that it would be difficult to determine what needs to be acquired or repurposed, by whom, and when.
d. **Describe the process that will be used to monitor the annual benchmarks including roles and responsibilities.**	**59**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.

6. **FUNDING AND BUDGET COMPONENT CRITERIA** Corresponding EETT Requirement(s): 7 & 13, (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. **List established and potential funding sources.**	**60-61**	The plan clearly describes resources that are available or could be obtained to implement the plan.	Resources to implement the plan are not clearly identified.
b. **Estimate annual implementation costs for the term of the plan.**	**61-63**	Cost estimates are reasonable and address the total cost of ownership, including the costs to implement the curricular, professional development, infrastructure, hardware, technical support, and electronic learning resource needs identified in the plan.	Cost estimates are unrealistic, lacking, or are not sufficiently detailed to determine if the total cost of ownership is addressed.
c. **Describe the district's replacement policy for obsolete equipment.**	**64**	Plan recognizes that equipment will need to be replaced and outlines a realistic replacement plan that will support the Curriculum and Professional Development Components.	Replacement policy is either missing or vague. It is not clear that the replacement policy could be implemented.
d. **Describe the process that will be used to monitor Ed Tech funding, implementation costs and new funding opportunities and to adjust budgets as necessary.**	**64**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.

7. **MONITORING AND EVALUATION COMPONENT CRITERIA** Corresponding EETT Requirement(s): 11 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. Describe the process for evaluating the plan's overall progress and impact on teaching and learning.	**65-66**	The plan describes the process for evaluation using the goals and benchmarks of each component as the indicators of success.	No provision for an evaluation is included in the plan. How success is determined is not defined. The evaluation is defined, but the process to conduct the evaluation is missing.
b. Schedule for evaluating the effect of plan implementation.	**66**	Evaluation timeline is specific and realistic.	The evaluation timeline is not included or indicates an expectation of unrealistic results that does not support the continued implementation of the plan.
c. Describe the process and frequency of communicating evaluation results to tech plan stakeholders.	**68**	The plan describes the process and frequency of communicating evaluation results to tech plan stakeholders.	The plan does not provide a process for using the monitoring and evaluation results to improve the plan and/or disseminate the findings.

8. **EFFECTIVE COLLABORATIVE STRATEGIES WITH ADULT LITERACY PROVIDERS TO MAXIMIZE THE USE OF TECHNOLOGY CRITERION** Corresponding EETT Requirement(s): 11 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. If the district has identified adult literacy providers, describe how the program will be developed in collaboration with them. (If no adult literacy providers are indicated, describe the process used to identify adult literacy providers or potential future outreach efforts.)	**69**	The plan explains how the program will be developed in collaboration with adult literacy providers. Planning included or will include consideration of collaborative strategies and other funding resources to maximize the use of technology. If no adult literacy providers are indicated, the plan describes the process used to identify adult literacy providers or potential future outreach efforts.	There is no evidence that the plan has been, or will be developed in collaboration with adult literacy service providers, to maximize the use of technology.

9. **EFFECTIVE, RESEARCHED-BASED METHODS, STRATEGIES, AND CRITERIA** Corresponding EETT Requirement(s): 4 and 9 (Appendix D).			
	Page in District Plan	**Example of Adequately Addressed**	**Not Adequately Addressed**
a. Summarize the relevant research and describe how it supports the plan's curricular and professional development goals.	**70-73**	The plan describes the relevant research behind the plan's design for strategies and/or methods selected.	The description of the research behind the plan's design for strategies and/or methods selected is unclear or missing.
b. 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.	**73**	The plan describes the process the district will use to extend or supplement the district's curriculum with rigorous academic courses and curricula, including distance learning opportunities (particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources).	There is no plan to use technology to extend or supplement the district's curriculum offerings.