

# **EDUCATION TECHNOLOGY PLAN**

## **JULY 1, 2006 – JUNE 30, 2011**



**BOLINAS-STINSON UNION SCHOOL DISTRICT**  
**CDS CODE 21-65300**

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## Executive Summary

We live in a rapidly changing and increasingly complex society with unprecedented quantities of information for consideration. Technology can help students develop skills, knowledge and insights necessary to meet rigorous content standards and make a successful transition to the world beyond school. In order to live productively in the 21st century our students need skills in critical thinking, problem solving, decision-making, communication and collaboration. The purpose of this technology plan is to provide a framework within which further integration of technology will continue to support learning.

The Bolinas-Stinson Union School District (BSUSD) Technology Plan has been written in order to meet certification requirements of the California Department of Education and has a three-year duration.

This plan has been developed, not only to set future directions for the use of technology in teaching and learning, but also to help the school District qualify for District e-Rate benefits and potential State and Federal funding through educational technology grants.

Having a current State-certified technology plan also qualifies us to receive Federal Formula funding under the Enhancing Education Through Technology (EETT) grant.

This technology plan describes steps to responsibly integrate computers and related technology into the District curriculum. It also prepares our students to be confident and proficient users of technology so that they can meet the requirements for Tamalpais Union High School District.

For each goal, the Technology Master Plan outlines the concrete objectives that will effectively support the Bolinas-Stinson District mission. The plan identifies a need and method for routine review and revision of the plan itself with the related site plans to insure continuing alignment of technology with curriculum development and the District's mission. The plan will be reviewed annually and specified areas may be reviewed more frequently, as indicated.

## District Overview

Bolinas –Stinson Beach Union School District is located in Bolinas, California. It is located about 15 miles north of San Francisco along the Pacific coast in Marin County. The district serves the towns of Bolinas and Stinson Beach and covers approximately 2.5 square miles.

Bolinas Stinson Union School District is a Kindergarten through 8<sup>th</sup> grade, with enrollment of 131 students. Students attend high school in the Tamalpais Union High School District. The District partners with the Educational Task Force (ETF), a K-14 consortium for southern Marin County that helps prepare Bolinas students and others for transition from elementary to middle to high school. The group focuses on curricular articulation as well as assessment and professional development so that all students in southern Marin schools arrive at high school with comparable learning experiences and the same core competencies.

Our two beautiful campuses were built and dedicated in 1981 after years of planning by community members and architects. Every attempt was made to build a school that was both functional and aesthetic.

### **Stinson Beach Campus**

Located on Highway One, a kilometer north of the community of Stinson Beach, this campus consists of three classrooms set back against the hillside with a view of the Bolinas Lagoon. The Stinson Beach campus houses the primary grades (K, 1, 2). Each classroom opens out to a courtyard, which provides a warm community feeling for the children and staff. A modern playground sits out on the field. The natural beauty of the location is enhanced by the presence of children.

### **Bolinas Campus**

Since the early part of the century, the Bolinas part of the campus has been located in Gospel Flats. The traditional look and feel of the school has been maintained in the new buildings. A replica of an old ranch house is now the school/district office. A replica of the original school building, built to modern earthquake standards, houses the school library and a computer learning center. The rest of the classrooms dot the 2.6 acre campus, along with a playing field, basketball and volleyball courts, and a large playground structure. Students are called to class by an old fashioned bell in the belfry of the library. Children in these grades are taught to live in the modern world surrounded by reminders of the past.

The following data offers a snapshot of our district during the 2004-05 school year from the Ed Data (<http://www.ed-data.k12.ca.us/welcome.asp> ) and Dataquest (<http://data1.cde.ca.gov/dataquest/> ) web sites.

<b>Bolinas-Stinson Union School District 2004-05 School Data</b>				
	<b>Number of Schools</b>	<b>Enrollment</b>	<b>Full-Time Equivalent Teachers</b>	<b>Pupil-Teacher Ratio</b>
Elementary	1	88	7	12.6
Middle	1	34	2	17.0
<b>Total</b>	<b>1 (combined)</b>	<b>122</b>	<b>9.0</b>	<b>13.6</b>

<b>Bolinas-Stinson Union School District, Students by Ethnicity 2004-05</b>		
	<b>District</b>	
	<b>Enrollment</b>	<b>Percent of Total</b>
American Indian	0	0.0
Asian	1	0.8
Pacific Islander	2	1.6
Filipino	1	0.8
Hispanic	12	9.8
African American	1	0.8
White	94	77.0
Multiple/No Response	11	9.0
<b>Total</b>	<b>122</b>	<b>100%</b>

<b>Bolinas-Stinson Union District, Student &amp; Teacher Data 2004-05</b>	
English Learners	2
Fluent-English-Proficient Students	120
Graduates (prior year)	20
% Fully Credentialed Teachers	9
Pupil Teacher Ratio	13.6
Avg. Class Size	13.6
Free or Reduced Price Meals	25
CalWORKs (formerly AFDC)	N/A

# Mission Statement

## **Bolinas-Stinson Beach Union School District Mission Statement**

*The Bolinas and Stinson Beach School Community believes that each child is a unique individual with an enormous capacity to learn. The Community shall work together to help each child to:*

- *Develop a lifelong love of learning*
- *Think critically and creatively*
- *Master academic skills and strive for excellence*
- *Build self-esteem, independence, responsible behavior, and respect for others*
- *Develop a concern for the environment and an awareness of the global community*
- *Contribute to the community at large*

## **Technology Vision Statement**

*The central role of technology in education is to enhance teaching and learning. In this enhanced educational environment students become familiar and reasonably proficient with popular technology-based tools, personal computers and the general structure and function of applications used in education and business. They learn to effectively and ethically use computers and other technology-based tools to augment creativity and enhance productivity. Technologies are in the educational process. Using appropriate technologies, communication channels within the entire school community are opened up and barriers to community participation in the educational process are lowered. Though technology can have a powerful positive impact on the school and community, it is not seen as an end in itself but as a potent tool that, when applied appropriately, can better prepare students for education beyond middle school and for continued life success.*

*We believe computer technology education at every grade level is most effective when embedded in the curriculum. Working closely with the teaching staff, students and outside technology education professionals, we will continue to develop appropriate and creative uses of computer technology to enhance the general curriculum being taught at each grade level. Though we believe in embedding technology in the curriculum, we recognize the need to offer a computer technology curriculum that provides basic education about typical computer operating system functions, application types and layout, effective research and project production, and ethical issues associated with computer use.*

## 1a. Plan Duration

The Bolinas-Stinson Union School District educational technology plan covers five years, from July 1, 2006 through June 30, 2011.

It will serve as the primary tool to guide the district's acquisition, sustainability, and integration of technology to support the district's curricular goals. The District Technology Committee, which consists of representatives of all stakeholder communities, will monitor this plan. Our Technology Committee will meet monthly to review progress and annually revise outcomes after the state releases achievement data for the district school. Any modifications required through such review will be communicated to both the district Superintendent and school board. The district Technology Coordinator, working together with the Technology Committee and Principal/Superintendent, will implement any required revisions working together with District staff.

## 2a. Stakeholder Involvement

Our District's Technology Committee, working together with District administration, is also our implementation oversight team. The group is comprised of district representatives who are responsible for implementing the plan, including district curriculum, data, and information Technology Coordinator, administrators, teachers, and parents.

The original technology team served as a strategic planning committee in the development of our first technology plan in 2002. Since then, the team has met regularly, typically once each month during the regular school year. Annual surveys conducted by the Site Council and the Technology Committee provide stakeholders with a mechanism for ongoing input. Updates regarding the objectives, funding, budgets, and curricular guidelines contained within our technology plan are communicated through an annual evaluation process that results in a public presentation to the District Board of Trustees. Progress is reviewed monthly at Technology Committee meetings to:

- Evaluate the status of the current technology plan and make adjustments if needed.
- Monitor progress on current technology projects.
- Gather and evaluate district technology data with regard to hardware, wiring, resources, professional development and projects.
- Collect and analyze survey and technology data.
- Identify and update common technology needs and issues.

This plan builds upon and incorporates previous work of the Technology Committee and District planning as adopted by the Board of Trustees.

As stakeholders review technology plan outcome and process data, the following key questions are addressed:

- Are the district and schools' visions for student success aligned to today's knowledge-based, Digital Age? Are administrators committed to the vision?
- Is student achievement improving where technology is being used?
- Are students demonstrating proficiency in technological literacy?
- Are educators proficient in incorporating technology tools to implement, assess and support a variety of effective practices for teaching and learning?
- Do students and school staff have necessary and appropriate access to technology to support effective teaching and learning?
- Is the digital divide being addressed through resources and strategies that ensure that all students are engaging in an educational program aligned to the district's vision of technology integration?

## **Stakeholder Groups**

**District Curriculum Personnel** – the Principal/Superintendent, Teacher Leaders and Instructional Staff.

**Design & Implementation Roles:** Representatives on our Technology Committee promote, direct, and facilitate the Technology Committee's development of broad and inclusive goals and objectives for curriculum, resources, and operations that include technology. Curriculum personnel define standards-aligned academic objectives by grade and subject; support research-based best practices and instructional programs; develop student assessment and data monitoring systems and monitor school performance and make adjustments based on school performance.

**District Technology Personnel** – the Technology Coordinator, classroom aide and technical support staff from Marin County Office of Education.

**Design & Implementation Roles:** The District Technology Coordinator provides overall coordination and oversight of technology implementation and the implementation of the goals and objectives set forth in this updated technology plan. The classroom aide and MCOE personnel help support the technology tools in place in the District.

**Site Administration** – Principal/Superintendent

**Design & Implementation Roles:** The Principal/Superintendent, working closely with the District Technology Coordinator, provides updates on tech plan implementation and needs; monitors teacher performance and student learning; makes adjustments based on teacher and student performance; ensures the use of adopted materials, research-based best practices and instructional programs; and provides input on how technology can better support the teaching of standards-aligned academic objectives.

**Instructional Staff** – The Technology Committee has at least one certificated teacher as a member at all times. Classified staff are also represented. Teachers regularly use the Technology Lab for expanding instructional opportunities.

**Design & Implementation Roles:** Representatives on our Technology Committee provide input on efforts and outcomes of technology programs they are using. Working closely with our Technology Coordinator, teachers design projects that support their curriculum that fully integrate technology, with the outcome of improved teaching and learning.

**Parents** – Parents of children enrolled in our Elementary and Middle School.

**Design & Implementation Roles:** Representatives on our Technology Committee provide input on the district's efforts to integrate technology and 21<sup>st</sup> century skills in the standards-aligned curriculum. The Technology Committee holds public meetings; we utilize public Board of Trustee meetings to discuss progress against and updates to the Technology Plan, and utilize the school Backpack Mail and annual surveys to keep parents involved. Parents provide constant input to the process at Board meetings and by serving on our Technology Committee.

**Government Agencies** – Our representative from the California Technology Assistance Project (CTAP) Region 4, Anne Bubnic.

**Design & Implementation Roles:** Our CTAP4 representative offered technical assistance with: the data analyses and revision of our goals and objectives; professional development planning; EETT Formula Funding; and compliance issues.

The Bolinas-Stinson Beach Union School District continues to solicit and expand our partnerships with stakeholders to enhance the infusion of educational technology into the curriculum. Our district recognizes that schools alone do not have the resources or expertise to keep pace with rapidly changing technology. We believe that these partnerships will help us serve the growing needs of an increasingly technical and global education system and society.

## 3. Curriculum

Our district is in the process of developing technology standards and revising curriculum standards. These are being developed over time in order to help teachers, administrators and parents have a better idea on what students at all grade levels will be learning. When technology is integrated into the classroom curriculum, students will learn to use technology not as an end in itself but as a tool to improve productivity, research information, solve problems, and communicate ideas. These standards will provide a structure to evaluate student's abilities.

### **3a. Current access to technology for teaching and learning.**

The Bolinas School Learning Center has a computer lab and 20 computer workstations. The computer lab is accessible to students during assigned periods. The lab is also open during the lunch hour, several days per week. The computer lab is also open to students from 3-5 pm, three days a week.

Eight computers (4 PCs and 4 Macs) were purchased in 2001. More recently, original equipment purchases have been augmented with 16 additional Macs and 4 additional scanner/copier/color printers connected to the PCs. This provides a total of 20 computer workstations (16 Macs, 4 PCs), with one table designated for future video production area with TV/VCR digital/analog converter. Eight of the Macs were upgraded with additional RAM and DVD burners for video editing. Two of the upgraded Macs also had their hard drives upgraded to 200GB capacity for local video storage. Several digital video and still cameras have been purchased for general use on both campuses, and for use in video production middle school elective classes. A digital projector is also installed in the Tech Lab for instructional and presentation use.

New computer tables and ergonomic chairs were purchased and installed at the beginning of the 2005-2006 school year. The furniture provides space for up to 22 seats and computers (11 computer tables with 2 seats per table). Normal classes do not exceed 18 students (as of the 2005-2006 school year), so this is ample capacity for any grade level.

There are two TV/VCR/DVD sets on carts on the Bolinas campus. TV/VCR/DVD sets are also permanently wall-mounted in K-8 classrooms and the Art Shop. The Art Shop is also outfitted with a networked Mac upgraded to better handle video editing. A second digital projector was purchased as part of a video documentary grant by the 4<sup>th</sup> grade and is available for use in other classrooms.

Each classroom has a minimum of two computer workstations. In the classroom, computers are used by teachers as productivity tools, for email, to record attendance and for grading purposes. Students use the classroom computers for Internet research and to complete writing assignments.

Special Ed and classroom teachers at the Bolinas campus have also made use of a wireless Mobile Lab from the Marin County Office of Education for student multimedia projects. Middle School students have used AlphaSmarts for writing assignments. One teacher participated in the CTAP Middle School Math Institute and was given class sets of graphing calculators and laptops on loan for five-week periods.

Finally, computer equipment for the entire administrative staff has been completely upgraded in the past two years.

### **3b. Use of Technology to Support Teaching and Learning**

In the Bolinas-Stinson Union School District we strive to develop a technologically literate learning community of adults and students. In this learning environment, technology is used as an integrated educational tool to reinforce and enhance education.

The entire teaching staff is integrating technology into the curriculum in some fashion, a significant increase over previous years. The sixth through eighth grade teachers have made especially good strides in supporting the use of technology as a learning tool.

The technical specialist conducts one-on-one meetings with each teacher at the beginning of the school year to identify key curriculum areas and gather technical resources that may support project-based learning. The Technology Specialist has designed and teaches an introductory computer technology curriculum for students covering popular operating systems, effective computer-based research, and ethical use.

Each student on both the Bolinas and the Stinson Beach campuses now has access to the district's Learning Network and to the Internet. The Learning Network represents the system of networked computers connected to centralized servers that provide students, staff and teachers password-protected access to roaming home directories, desktops and settings from any Mac or PC on campus. Each student and staff member has a password-protected file.

We estimate that 90% of eighth grade students meet or exceed the *existing* grades 6 through 8 benchmark standards—except for touch typing skills and the ability to pass the Tamalpais High School technology exit examination. Perhaps 90% of fifth graders meet the grades 3 through 5 benchmark standards, though students are not regularly sent to the computer lab until third grade.

As of 2005-2006, students in grades K-2 do not have regularly scheduled computer time, although they occasionally are allowed to use educational software titles and teachers assist them in story writing and project making with computers. Students in third grade come to the computer lab occasionally for general instruction, and for six-week art class rotations where they create comic books and other artwork on computers. Students in fourth grade attend two 45 minute computer classes per week, covering basic computer use, web design and with a strong focus on typing skills. Fifth through eighth grade students attend one 45 minute computer class per week, covering all fourth grade skills, as well as more advanced word processing (Microsoft Word), presentations (PowerPoint) and spreadsheets (Excel). Fifth through eighth grade students also have an additional

regularly-scheduled 45 minute tutorial period available to them in the computer lab each week. This computer lab tutorial period is used for completing writing assignments, for working on classroom projects that benefit from web research sources, for creating charts and multimedia presentations. Eighth grade students pay particular attention to Tam High School Computer Proficiency requirements, studying and practicing example tests and assignments provided on the Tam High School web site.

<b>Subject</b>	<b>Software</b>	<b>Targeted Students</b>	<b>Comments</b>
Art	Adobe Photoshop	Grades 3-4	2 times per week for two 6 week sessions per year
Art	Flying Colors	Grades K-4	Used on occasion by students during free time
Art (source mtrls. for collages)	Web browser (Safari, Mozilla, Internet Explorer)	Grades 3-4	2 times per week for two 6 week sessions per year
Keyboarding	Ten Thumbs Typing Tutor	Grade 4	1 to 2 times per week
Keyboarding	Ten Thumbs Typing Tutor	Grades 5-8	1 to 2 times per week
Math	Math Blaster	Grades 1-4	Used by resource students at least once per week
Math	Microsoft Excel	Grades 4-8	As necessary (1-3 times per trimester) for statistical and mathematical analysis and observation
Math and Science	Web browser (Safari, Mozilla, Internet Explorer)	Grades 4-8	As necessary for presenting math and science-related web sites (e.g. NASA Mars Lander) and conducting research (1-5 times per trimester).
Media Production	Adobe Photoshop, Bridge, Indesign	Grades 3-8	Twice per week for 8 <sup>th</sup> grade yearbook class, as necessary for others
Media Production	iMovie, iDVD	Grades K-8	Animation / claymation, presentations, documentaries, portfolios
Multiple Subjects	Microsoft Powerpoint	Grades 5-8	Presentations 1-3 times per trimester
Portfolios	iPhoto	Grades K-2	Teachers collaborate with students to present student projects in slideshows and books
Reading	Reader Rabbit	Grades 1-4	Used by resource students at least once per week
Reading	Wynn	Grades 3-8	Used by resource students at least once per week
Science	Microsoft Excel	Grades 4-8	As necessary (1-3 times per trimester) for presenting (charts) and analyzing (formulas) scientific data
Web Design	Mozilla Composer	Grade 4	Up to 2 times per week
Writing	Microsoft Word	Grade 4-8	1 to 2 times per week
Writing	Microsoft Word, AppleWorks	Grades K-2	Teachers and students work together to put writing samples onto computer
Writing	Web browser (Safari, Mozilla, Internet Explorer)	Grades 4-8	Current events, reports and reference

### **3c. Summary of District's Curricular Planning Documents**

**Summary of the district's curricular goals and academic content standards, as spelled out in various comprehensive district and site planning documents.**

The technology committee consulted several district documents in the development of this plan, including SARC, the district education plan, State and Federal district-wide school achievement data from annual AYP, API, STAR CST, CELDT results. An adopted district education plan is in existence. Work is currently being conducted on aligning curriculum with the California Content Standards and on using data to improve instruction. CST testing results indicate that 48.4% of District students scored proficient or above in Math Testing (2005). 58.1% of students scored proficient or above in Language Arts. The district has chosen to focus on curriculum that helps improve student achievement in language arts and math. Technology activities will be designed to enhance instruction in these areas.

Other helpful documents included the Technology Committee Three-Year Report, which outlines the district's accomplishments since the last technology plan and makes recommendations on what is needed. These needs will be addressed in the new technology plan. The Computer Proficiency Graduation Requirements at Tamalpais Union High School District were also noted in development of the technology plan. It is our desire to have students meet these requirements by graduation from 8<sup>th</sup> grade so that they arrive at the high school with these competencies already in place.

### 3d. Using Technology to Improve Teaching and Learning in support of District Curricula Goals.

<b>Goal 1: 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.</b>		
<b>Objective 1 of 1:</b> By June 2011, 95% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards		
<b>Benchmarks</b>		
<b>Year 1</b> By June 2007, 50% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.		
<b>Year 2</b> By June 2008, 60% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.		
<b>Year 3</b> By June 2009, 70% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.		
<b>Year 4</b> By June 2010, 80% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.		
<b>Year 5</b> By June 2011, 95% of staff will utilize technology as a tool to support all students in meeting, exceeding, and demonstrating mastery of state academic content standards.		
<b>Data to be Collected and Evaluated</b>	<b>Timeline</b>	<b>Person Responsible</b>
Teacher lesson plans	Annual	Principal, Tech Director
Student performance indicators (see index)	2006	Tech Director
Activities addressing performance indicators	Annual	Tech Director
Samples of student work	Annual	Teachers
Teacher Training schedules and materials.	Annual	Tech Director
Logs of lab usage	Annual	Tech Director
<b>Implementation:</b>		
Teachers and the tech director will study curriculum standards. They will create a template outlining levels of proficiency for each grade level and how they will be achieved. (2006, 2007)		
Teachers and the Tech Director will work together as a team to plan technology-enriched units of practice that have “real world” relevancy and that are integrated to the grade level curricula. (2007-2011)		
The Tech Director will train teachers to lead activities in the lab (2007-2011)		
Teachers will follow the template outlining proficiency indicators by grade level. See Appendix (2007-2011)		
Teachers and the tech director will work together to create assessment tools that measure student proficiencies.		
The tech director will provide lab support as needed.		
<b>Monitoring and Evaluation</b>		
The Technology Committee monitors progress toward achieving these objectives and, with the superintendent and Technology Coordinator’s input, makes formal recommendations to the Board.		

**Goal 2: Technology will be integrated to support increased achievement in the areas of Language Arts through standards-based curricular activities in Grades 5-8.**

**Objective 1 of 2:** By June 2011, 100% of 6<sup>th</sup>-8<sup>th</sup> grade students and 70% of fifth grade students will have produced at least two appropriate grade level word-processed documents as the tool to demonstrate standards-aligned writing skills.

**Benchmarks**

**Year 1**

By June 30, 2007, 50% of Grade 6-8 students will produce at least two grade level appropriate, word-processed documents as the tool by which to exhibit proficient standards-aligned writing skills.

**Year 2**

By June 30, 2008, 70% of Grade 6-8 students and 40% of 5<sup>th</sup> grade students will produce at least two grade level appropriate, word-processed documents as the tool by which to exhibit proficient standards-aligned writing skills.

**Year 3**

By June 30, 2009, 80% of Grade 6-8 students and 50% of 5<sup>th</sup> grade students will produce at least two grade level appropriate, word-processed documents as the tool by which to exhibit proficient standards-aligned writing skills.

**Year 4**

By June 30, 2010, 90% of Grade 6-8 students and 60% of 5<sup>th</sup> grade students will produce at least two grade level appropriate, word-processed documents as the tool by which to exhibit proficient standards-aligned writing skills.

**Year 5**

By June 30, 2011, 100% of Grade 6-8 students and 70% of 5<sup>th</sup> grade students will produce at least two grade level appropriate, word-processed documents as the tool by which to exhibit proficient standards-aligned writing skills.

Data for collection and analysis	Timeline	Person Responsible
Teacher lesson plans District Technology Benchmarks District writing rubric aligned to California's adopted Language Arts Standards Samples of Student work	Annual (2006-2011) 2006, 2007 2006 Annual (2006-2011)	Teachers, principal Tech Director Principal Classroom teachers

**Implementation:**

Tech Director will train students on Microsoft Word (2006-2011)  
Teachers will assign at least two assignments in MS Word per year.  
Teachers will collect and evaluate student work (2006-2011)  
Teachers, principal and the technology committee will assess student portfolios at the end of the school year (2006-2011)

**Monitoring and Evaluation:**

Teachers and IT Staff will assess performance. Teachers will share results with the Principal. The Principal will monitor accomplishment of this goal through conferences with each member of the teaching staff. Teachers will be asked to provide evidence of a lesson or lessons taught which involved technology-enhanced instruction. The Tech Committee will make modifications as needed.

### 3e. Information Literacy & Technology

*Today's student lives and learns in a world that has been radically altered by the ready availability of vast stores of information in a variety of formats. The learning process and the information search process mirror each other: Students actively seek to construct meaning from the sources they encounter and to create products that shape and communicate that meaning effectively. Developing expertise in accessing, evaluating, and using information is in fact the authentic learning that modern education seeks to promote.*

In order to prepare students to succeed in a global, high-tech, information rich society, we must ensure that all students and staff are effective users of tools, ideas and information to meet academic content goals.

Information Literacy Standards for Grades 1-8 are attached as **Appendix B** to this plan, as adapted from the American Association of School Librarians. Additionally, Bolinas-Stinson Union School District has established Technology Performance Indicators for Grades K-8, which can be found in **Appendix A**.

Bolinas Stinson Union School District has adopted Tam Union High School District student learning outcomes for technology as part of the 8<sup>th</sup> grade technology benchmarks. At Tam, students must meet a standard for each of the four proficiency areas including timed typing, an objective written test on terms and concepts, word processing, and a power point task. Embedding these tools in curriculum and instruction and as teaching/learning tools will help graduates of our school district enter Tamalpais Union High School District as confident, proficient learners.

All instructional efforts to meet or exceed Information Literacy and Technology Proficiencies will be completed in partnership by classroom teachers, the library media specialist and the District Technology Coordinator as they teach the essential knowledge and skills that prepare students to locate, analyze, interpret and communicate information and ideas in an information-intensive environment. Authentic practice of these skills enables students to realize their potential as informed citizens who think critically and solve problems, to observe rights and responsibilities relating to the generation and flow of information and ideas and to appreciate the value of literature in an educated society.

**Goal 3: Information Literacy and Technology skills will be taught throughout the core curriculum in Grades 1-8.**

**Objective 1 :** By June 2011, 95% of Grade 1-8 Teachers will incorporate the **Information Literacy Skills** Integration Matrix for Literature and Library, Research Process and Technology into their curriculum and instruction.

**Benchmarks**

**Year 1**

By June 2011, 30% of Grade 1-8 Teachers will incorporate the Grade-Level Information Literacy Skills Integration Matrix and Technology Performance Indicators into their curriculum and instruction.

**Year 2**

By June 2011, 40% of Grade 1-8 Teachers will incorporate the Grade-Level Information Literacy Skills Integration Matrix and Technology Performance Indicators into their curriculum and instruction.

**Year 3**

By June 2011, 60% of Grade 1-8 Teachers will incorporate the Grade Level Information Literacy Skills Integration Matrix into their curriculum and instruction.

**Year 4**

By June 2011, 80% of Grade 1-8 Teachers will incorporate the Grade Level Information Literacy Skills Integration Matrix for Literature and Library, Research Process and Technology into their curriculum and instruction.

**Year 5**

By June 2011, 95% of Grade 1-8 Teachers will incorporate the Grade Level Information Literacy Skills Integration Matrix for Literature and Library, Research Process and Technology into their curriculum and instruction.

<b>Data for collection and analysis</b>	<b>Timeline</b>	<b>Person Responsible</b>
Teacher lesson plans District Technology Benchmarks Information Literacy Skills Matrix District writing rubric aligned to California's adopted Language Arts Standards Samples of Student work	Annual (2006-2011) 2006, 2007 2006  Annual (2006-2011)	Teachers, principal Library Media Teacher Tech Director Principal Classroom teachers

**Implementation:**  
Starting in first grade, students will develop grade appropriate literacy skills that follow the skills integration matrix for literature and library, research and technology.  
Tech Director and teachers will train students in Information Literacy skills (2006-2011)  
Students will demonstrate knowledge of these skills in technology products.  
Teachers will collect and evaluate student work (2006-2011)  
Teachers, principal and the technology committee will assess student portfolios at the end of the school year (2006-2011)

**Monitoring and Evaluation:**  
Teachers and IT Staff will assess performance. Teachers will share results with the Principal. The Principal will monitor accomplishment of this goal through conferences with each member of the teaching staff. Teachers will be asked to provide evidence of a lesson or lessons taught which involved technology-enhanced instruction. The Tech Committee will make modifications as needed.

**Goal 4: All Students will demonstrate instructional technology and information literacy skills**

**Objective 1 of 1:** By June 2011, 90% of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology-enriched products that support curricular goals. (See Appendix A & B).

**Benchmarks**

**Year 1**

By June 30, 2007, 25% of all of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology enriched products that support curricular goals.

**Year 2**

By June 30, 2008, 40% of all of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology enriched products that support curricular goals.

**Year 3**

By June 30, 2009, 60% of all of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology enriched products that support curricular goals.

**Year 4**

By June 30, 2010, 80% of all of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology enriched products that support curricular goals.

**Year 5**

By June 30, 2011, 90% of all of all students will meet grade level appropriate instructional technology and information literacy standards, as defined by the District and will demonstrate this knowledge with technology enriched products that support curricular goals.

Data Collection and analysis	Schedule	Person Responsible
Lesson Plans Information Literacy Integration Skills Matrix Student Technology Benchmarks, Scope & sequence for acquiring technology skills. Training Materials Assessment rubrics	Annually 2006, 2007  Annually Annually	Classroom teachers  Tech Director  Tech Director  Classroom teachers

**Implementation Plan**

Establish information literacy standards by grade level. (2006, 2007)  
Share standards with staff (2007, 2008)  
Plan Collaborative lessons (2007-2010)  
Instruct students in multimedia software usage for presentation of research projects (2006-2011)  
Teach students note taking skills, Internet searching, paraphrasing strategies using literacy content from CTAP IV and others (2007-2011)  
Develop rubrics for assessment (2006, 2007)

**Monitoring and Evaluation**

The Technology Committee monitors progress toward achieving these objectives and, with the superintendent and Technology Coordinator's input, makes formal recommendations to the Board.

## **CTAP Region 4 Commitment to Rural Districts**

CTAP Region IV is working with rural and underserved districts to provide access to resources that can help overcome geographical barriers. Regional support includes site-based trainings and subsidized subscriptions to two online resources: Atomic Learning and Nettekker D.I.

Atomic Learning provides just-in-time learning experiences through thousands of one-minute video clips on topics related to hundreds of educational software titles used in the classroom. These include OS X, Windows XP, KidPix, Hyperstudio, PowerPoint, Keynote, Microsoft Word and Excel, and Inspiration. Curriculum tools on the web site show teachers how to make Classroom Newsletters in the content areas and provide downloadable templates and tutorials for Power Point and other software. Other topics include Google Advanced Searching.

One of the greatest difficulties that teachers have is applying technology to the standards. In the rural schools, this is an even greater problem because educators often teach multi-age classes and must know the standards for several grade levels. For this reason, CTAP is also subsidizing training and cost of teacher subscriptions to Nettekker D.I. Nettekker subscriptions are valid for both teachers and students and they will be able to use them in the classroom or at home.

Nettrekker D.I. has differentiated instruction woven into all of its components making it even more valuable. Lexile scores are returned on all of the search results. There is a built-in dictionary key that activates when a user moves to a search result, so students can click on any word and find out what it means. There is also a tabbed section for English Learners that includes reading and writing skills, listening, speaking and fluency. Teachers will be able to search by state standards, by keyword and by Elementary, Middle or High School. Rurals Training on Nettekker and Atomic Learning was scheduled in October 2006 at the Marin County Office of Education but many Bolinas teachers were unable to participate. Additional training will take place in Fall 2007, with follow-up support over three years to encourage all teachers to use these tools. Further support for Nettekker usage is offered in Atomic Learning tutorials.

### **3f. Equity of Access**

We are a small school district with less than 150 students and a comfortable student: computer ratio in the lab. Access is not a problem. Networked computers are available in all classrooms and in the Learning Center. The computers are available during normally scheduled hours and during the lunch break and after school on most days. In the classroom, we have enough up-to-date computers to meet the minimum ratio of one computer for every ten students. Special Education students have access to equipment, as needed. We will continue to work hard to make sure equity is maintained in the district both in personnel and equipment. Funding for equipment repair and replacement should be calculated on a per pupil basis to insure equity.

### **3h. The Use of Technology to Facilitate Communication between the School District, the Parents, and the Local Community**

Email communication between parents and school is limited, primarily due to lack of high speed Internet access in Bolinas, which inhibits routine Internet use by families.

The School maintains a web site that provides Friday backpack mail information, bus schedules, monthly menus, minutes of meetings and agendas for School Board Meetings.

It will be a goal of the district to maintain a web site with which to facilitate communication between the school, the parents, and the larger community. Much thought will be given to post as much information as possible on the web site. A few examples would be Board of Education meeting agendas and minutes, curriculum guides, the district school year calendar, school policies, Student Council agendas and minutes, information regarding the School Site Council, the School District Foundation, and the Alumni Association, job openings, and research tools.

### **3i. Administrative Use of Technology/Student Record Keeping**

This is a small rural school district with less than 150 students so sophisticated record keeping systems are not a great need. Report cards are created and filed electronically, using a Filemaker Pro customized database.

A web-based Open Source, Student Information System called CENTRE is used for daily attendance records, and CSIS records.

Just for the Kids (<http://www.jftk-ca.org>) is also available to the school district as a free resource for disaggregating data and analyzing performance on the CST. Additionally, STAR testing data is disaggregated to provide feedback and guidance for teachers in addressing the needs of the individual student.

### **3j. Monitoring and Evaluation**

The technology committee is composed of teachers, board members, tech staff, administrators and volunteers. The committee meets monthly to review progress, monitor benchmarks and timelines and modify plans as needed.

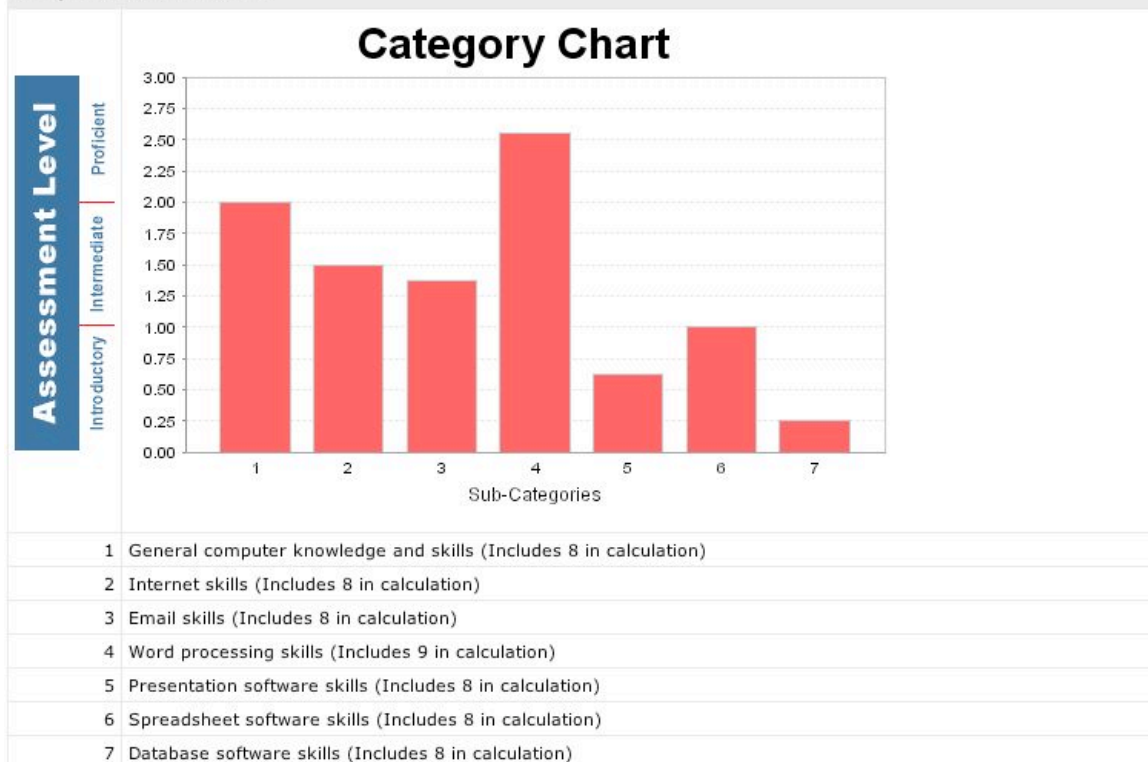
## 4. Professional Development

Our vision is to develop and implement a staff development program for administration, teaching, learning, management, and productivity that encourages and supports the integration of technology into the curriculum. Our goal is to empower teachers to provide technology rich learning environments through effective teaching strategies that align to both the district technology standards and to school goals.

### 4a. Certificated and administrative technology skills and needs

Bolinas School District teachers are required to participate in the CDE's self-assessment of technology proficiencies each year by taking the Ed Tech Profile Survey which identifies competencies in seven areas and which also collects aggregate data on teacher use of technology in the classroom and for student learning.

**Bolinas-Stinson Union Elementary District has 10 credentialed teachers, this chart represents the assessment summary for 9 teachers or 90%. It is important to note that this includes both fully completed and partially completed assessments.**



Teachers were highly proficient in word processing skills and in general computer knowledge. Skills in the other five areas were in the introductory to intermediate levels

of proficiency, with the lowest areas of competency in database software skills. Analysis of aggregate data for Standards 9 and 16 revealed a number of areas where teachers are in need of training. The list is presented here and will be used as a guide for future trainings.

## **BSUSD Professional Development Needs**

### **1. Using Technology in the Classroom (Standard 9)**

- Management & alignment of technology resources with content
- Knowledge of student competencies in technology and use of technology for completion of instructional goals.
- Knowledge of research & best practices in technology in education
- Use of electronic grade books or spreadsheets for student records
- Use of word processing to create lesson materials and instructional tools
- Use of email to communicate with colleagues and parents
- Knowledge about how to select appropriate technology resources to reach instructional goals.
- Knowledge of district policies on use of hardware and software in the classroom.
- Ability to identify resources that assist teachers in addressing special needs and diverse learning styles.
- Evaluation of simulation software, mathematical modeling, mind-mapping, virtual realities and multimedia to meet learning needs of students.
- Ability to use electronic research tools. Ability to teach students how to evaluate authenticity, reliability and bias of data to assess information gathered.
- Knowledge of copyright & fair use and issues like software piracy, plagiarism, electronic media licensing.
- Knowledge of acceptable use policies

### **2. Using Technology to Support Learning (Standard 16)**

- Creation of list serves, use of instant messaging, audio/video conferencing and other collaborative tools.
- Alignment of technology enhanced lessons with the curriculum
- Creation of technology-enhanced learning opportunities where students use a variety of technology tools to accomplish their learning objectives.
- Use of data (grade-books, spreadsheets) to assess student learning and set learning goals.
- Use of technology resources to help students develop problem-solving skills (probes, spreadsheets, graphing, and databases. Use of mind-mapping tools and multi-media to report information.
- Redesign of lesson plans to provide diverse learning opportunities that engage students in planning, locating, evaluating, selecting and using information to solve problems and draw conclusions.
- Knowledge of how to present lesson content in a manner that addresses multiple student learning styles.
- Use of rubrics & checklists to evaluate student use of technology tools & resources
- Ability to evaluate student ability to communicate knowledge & understanding of lesson content, using computer skills.
- Data analysis. Use of technology-based assessment tools to set goals, monitor student progress and share results.
- Use of evaluation tools that assist teachers in determining if using technology improved student learning so teachers can adjust teaching and lessons. Includes student reflections on effectiveness.

The Ed Tech self-assessment will be required of all new teachers that are hired in the district. In addition to the Ed Tech Profile, we plan for the District Technology Committee to continue on an annual basis the one-to-one interviews of all school district staff which we have found to be so fruitful in order to track changing attitudes, to enable staff to express needs, and to receive staff recommendations. The Committee will also explore ways in which to receive input from parents and other community members regarding district technology needs.

#### **4b. Professional Development Opportunities**

CTAP Region IV has targeted rural and underserved populations for support in the next three years. Professional development is one of the areas where they will offer support. Because of geographic distances, teachers are often not able to take advantage of workshops that CTAP or MCOE typically offer. New solutions are being prescribed, including professional development and outreach in more localized environments. CTAP also plans to experiment with online training support for rurals by subsidizing subscriptions to online resources such as Atomic Learning and Nettekker. This will help overcome problems related to limited tech support onsite and the challenges posed by providing standards-based content for multi-age classrooms.

##### **Atomic Learning (<http://www.atomiclearning.com>)**

- Rural school districts often have limited tech support. And there are fewer opportunities for teachers to learn from each other. Often small technical problems become barriers to using technology for teaching and learning. Atomic Learning works to overcome that by offering 24/7 access to online narrated software training and hundreds of tutorials for software applications that are used in the schools. They are viewed as 1-3 minute video clips and can provide immediate solutions to problems. Teachers can also prepare for student learning by using the tutorials to develop the skills in advance. Additionally, Atomic Learning tracks usage and can be used as a paper trail to document learning for teachers in need of training hours to maintain their credential.

##### **Nettrekker D.I. (<http://www.nettrekker.com>)**

- Nettekker is designed to help teachers integrate state standards into the core curriculum. Content is aligned with state standards and searchable by state standards. For teachers who need examples of technology-integrated resources that support specific academic improvement goals, it is ideal. Nettekker is particularly helpful for our rural school district teachers who teach in multi-age classroom environments where standards for multiple grade-levels must be supported. Readability indexes built into Nettekker also help our teachers identify age-appropriate resources.

Both Atomic Learning and Nettekker offer many curriculum tools, including how to make classroom newsletters and how to do advanced searches on Google. Nettekker offers timelines, famous person searches, classroom management resources and quick links to grammar and spelling tools, dictionaries, atlases, encyclopedias and online museums.

In addition, CTAP Region IV has an entire syllabus of materials posted online for teaching Information Literacy skills such as Deep Questioning, Safe Searching, Critical Note Taking and Expository Writing. They will work with the MCOE Rural School Consortium Technology team to make sure that training in this area is brought to all rural school districts in Marin.

Professional Development

**Goal 1 of 3: Administrative staff/teachers will use technology for email, word processing, desktop publishing, spreadsheets, courseware and internet searching.**

**Objective:** 90% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

**Benchmarks**

**Year 1**

20% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

**Year 2**

40% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

**Year 3**

60% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

**Year 4**

80% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

**Year 5**

90% of the teachers in this small rural school district will achieve **intermediate proficiency in two or more** of the above personal skill sets and will know how to apply them to student teaching and learning.

<b>Data to be collected and analyzed</b>	<b>Timeline</b>	<b>Person Responsible</b>
Ed Tech Profile proficiency indicators	Annually	IT Staff
Lesson plan documentation of standards-based resources.	Annually	CTAP County Specialist Technology Committee
Teacher portfolio of lesson plans and student projects.	Annually	Marin Rural Technology Consortium

**Implementation:** Administrators/teachers will learn how to use Atomic Learning and Nettrekker as professional development tools (2006/2007). Teachers will use electronic resources for professional development to achieve the above goals (2006-2011). Comparative charts of Ed Tech Profile aggregate data will be generated on an annual basis. Data will be reviewed by the Technology Committee, which will make further training recommendations. Administrators in the Marin Rural Technology Consortium will exchange ideas, share lessons and learning experiences at monthly meetings. Bi-Annual review of progress by consortium members.

**Monitoring and Evaluation**

The Technology Committee monitors progress toward achieving these objectives and, with the superintendent and Technology Coordinator's input, makes formal recommendations to the Board.

**Professional Development**

**Goal 2 of 3: Provide training for teachers and support staff on integration of technology into the curriculum using online resources.**

**Objective:** By 2011, 90% of Teachers in this district will use Atomic Learning and/or Nettekker electronic resources for online training and support at least once a week.

**Benchmarks**

**Year 1**

20% of the small rural school district's teachers will use Atomic Learning **and/or** Nettekker D.I. electronic resources for online training and support **at least once a month.**

**Year 2**

40% of the small rural school district's teachers will use Atomic Learning **and/or** Nettekker D.I. electronic resources for online training and support **at least once a month.**

**Year 3**

60% of the small rural school district's teachers will use Atomic Learning **and/or** Nettekker D.I. electronic resources for online training and support **at least once a month.**

**Year 4**

80% of this small rural school district's teachers will use Atomic Learning **and/or** Nettekker D.I. electronic resources for online training and support **at least once a month.**

**Year 5**

90% of this small rural school district's teachers will use Atomic Learning **and/or** Nettekker D.I. electronic resources for online training and support **at least once a month.**

<b>Data to be collected and analyzed</b>	<b>Timeline</b>	<b>Person Responsible</b>
Paper trails of Atomic Learning usage	2006-2011	CTAP Representative
Logs of Nettekker access	2006-2011	CTAP County Specialist
Ed Tech Profile proficiency indicators	Annually	Tech Director, CTAP
Lesson plan documentation of standards-based resources.	Annually	County Specialist
Teacher portfolio of lesson plans and student projects.	Annually	Principal, Tech Committee

**Implementation:** The CTAP County Specialist will schedule localized trainings on use of Atomic Learning, CLRN and Nettekker for teaching and learning (Fall, 2006). Accounts will be distributed in a way that allows CTAP to document usage (2006-2011). The teachers will use technology to complete instructional tasks, including the use of e-mail, word processing, electronic publishing, spreadsheets, courseware and internet search and retrieval program skills (2006-2011). Administrators & Staff will take the Ed Tech Profile online assessment annually (2006-2011).

**Monitoring and Evaluation**

CTAP will monitor usage of accounts on a semi-annual basis and will provide additional training if needed. The technology committee will review technology activities annually and will plan future trainings based on needs and the results of the annual Ed Tech Profile survey. The Marin Rural Technology Consortium will share their experiences and progress at monthly meetings.

Professional Development

**Goal 3 of 3: Provide near real-time technical support for all types of computer technology use within the district.**

**Objective:** By 2011, 90% of teachers will include at least one technology component in their annual professional development plan

**Benchmarks**

**Year 1**

30% of Bolinas School District teachers will include at least one technology component in their annual professional development plan, formulated in consultation with the principal.

**Year 2**

40% of Bolinas School District teachers will include at least one technology component in their annual professional development plan, formulated in consultation with the principal.

**Year 3**

50% of Bolinas School District teachers will include at least one technology component in their annual professional development plan, formulated in consultation with the principal.

**Year 4**

70% of Bolinas School District teachers will include at least one technology component in their annual professional development plan, formulated in consultation with the principal.

**Year 5**

90% of Bolinas School District teachers will include at least one technology component in their annual professional development plan, formulated in consultation with the principal.

<b>Data to be collected and analyzed</b>	<b>Timeline</b>	<b>Person Responsible</b>
Teacher Professional Development Goals	2006-2011	Principal
Certificate of attendance at local, county, regional, state or online trainings.	2006-2011	Teacher
Teacher portfolios of Technology-rich lesson plans	Annually	Teacher
Samples of student work	Annually	Teacher
Aggregate data from Ed Tech Profile.	Annually	District Tech Committee

**Implementation:** Teachers will meet annually with the principal to create professional development goals that include at least one technology component. Teachers will design and implement technology enriched lesson plans. Teachers will save examples of best practices and student samples of work in their personal portfolios to be reviewed annually. Administrators & Staff will take the Ed Tech Profile online assessment annually (2006-2011).

**Monitoring and Evaluation**

The principal will review teacher goals on an annual basis to ensure that a technology component is identified. The technology committee will review technology activities annually and will plan future trainings based on needs and the results of the annual Ed Tech Profile survey. The Marin Rural Technology Consortium will share their technology experiences and progress at monthly meetings.

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

### **5a. Description of hardware, infrastructure and networking and telecommunications infrastructure needs.**

The District Technology Committee analyzed their three-year plan in May 2005 and defined the following infrastructure needs:

- Continue to staff the technology lab with a qualified aide for three hours on Tuesdays and Fridays (a total of 6 hours per week) so that students have access to the lab during peak usage times all five days of the week.
- Exchange the computer lab room with the Learning Center. The larger Learning Center room has the additional advantage of being closer to the library, thus facilitating research. The present computer lab space is more suitable for the Learning Center in that it contains cabinets and a sink.

### **5b. Description of existing hardware, infrastructure, networking and telecommunication infrastructure.**

The Bolinas School Learning Center has a computer lab and 20 computer workstations. Eight computers (4 PCs and 4 Macs) were purchased in 2001. Original equipment purchases have been augmented with 16 additional Macs and 4 additional scanner/copier/color printers connected to the PCs. This provides a total of 20 computer workstations (16 Macs, 4 PCs), with one table designated for future video production area with TV/VCR digital/analog converter. Eight of the Macs were upgraded with additional RAM and DVD burners for video editing. Two of the upgraded Macs also had their hard drives upgraded to 200GB capacity for local video storage. Several digital video and still cameras have been purchased for general use on both campuses, and for use in video production middle school elective classes. A digital projector is also installed in the Tech Lab for instructional and presentation use.

New computer tables and ergonomic chairs were purchased and installed at the beginning of the 2005-2006 school year. The furniture provides space for up to 22 seats and computers (11 computer tables with 2 seats per table). Normal classes do not exceed 18 students (as of the 2005-2006 school year), so this is ample capacity for any grade level.

There are two TV/VCR/DVD sets on carts on the Bolinas campus. TV/VCR/DVD sets are also permanently wall-mounted in K-8 classrooms and the Art Shop. The Art Shop is also outfitted with a networked Mac upgraded to better handle video editing. A second digital projector was purchased as part of a video documentary grant by the 4<sup>th</sup> grade and is available for use in other classrooms.

District-wide Internet access is provided by the Marin County Office of Education

(MCOE) via a point-to-point T1 connection. A Cisco router provides firewall protection and web content is filtered via MCOE proxy server for appropriate use. Each classroom has at least two computers available for teacher and student use. Hardware and software upgrades have brought these computers to similar levels of computing capability, along with compatible applications. A centralized fileserver allows users to move easily between computer locations while maintaining access to password-protected user data and equivalent software programs. Database servers provide district-wide, password-protected access to grading, attendance and student information systems. Each building is connected via 100Mb category 5 Ethernet cable, augmented by 54Mb 802.11g wireless access points to allow laptop users to connect wirelessly to the school network. The T1 connection and fileservers are located on the Bolinas campus. The Stinson Beach and Bolinas campuses are linked by a dedicated 54Mb 802.11g wireless bridge that spans the 2 ½ mile distance across the Bolinas Lagoon and provides full access to the Bolinas campus T1 and all its resources from the Stinson Beach campus, without any additional Internet service provider fees.

### **Current level of technical support**

The District Technology Coordinator works 30 hours per week and is on call, as needed. The board approved a lab aide position in 2005 to staff the lab two days each week during periods of high-peak usage.

The Technology Coordinator strives to coordinate the integration of computer technology into all curricular areas as appropriate and consistent with the Tech Plan. He provides staff development in-services and individualized training, in addition to assisting teachers with lesson planning and supporting classroom projects. He teaches classes that focus on computer skills which support math, science, reading, writing, research, art, media production and the appropriate use of computer technology and the Internet. He supports art and elective teachers in various classes that rely on technology, including, but not limited to, Claymation, documentary filmmaking and yearbook. The Technology Coordinator works with various stakeholders such as the administration, Board of Directors, Technology Committee, Facilities Group and the Bolinas-Stinson School Foundation to plan for and accommodate future growth and needs in areas of technology. The Technology Coordinator manages and maintains all computer equipment on campus, including two database servers, one web server, two fileservers, a DNS server, a router, all desktop and laptop computers. Lastly, the Technology Coordinator installs and configures software, and develops the report card database and intranet website.

# Technical Support Goals, Objectives and Benchmarks

The following goals, objectives and benchmarks are designed to successfully launch our technology program today, and ensure its vitality for years to come. We begin the goals, objectives and benchmarks section with the technical support to denote its primacy among the components addressed in this section.

## Goals relating to Technical Support:

**Technical Support Goal 1 of 5:** Near real-time technical support for all types of computer technology use within the district

**Objective 1 of 2:** Retain a dedicated Technology Coordinator for 30 hours per week, school year + 4 weeks.

**Benchmarks:** Technology Coordinator on the job at least two weeks before first day of school year.

**Who:** Technology Coordinator

**Technical Support Goal 2 of 5:** Create and implement computer use and maintenance policies, including hardware configuration and management, software management, and security.

**Objective 1 of 2:** Create ethical computer use policy based on MCOE computer ethics policy. Use MCOE policy that is already in place. Implementation needs to be monitored.

**Benchmarks:** Ethics policy approved by the Board of Trustees by August Board meeting. [See also Curriculum section, Goal 3, pages 14-15]

**Who:** Board of Trustees adopts policy. Teaching staff, including Technology Coordinator, oversee adherence to this policy.

**Objective 2 of 2:** Create baseline hardware and software configuration and maintenance policy.

**Benchmarks:** Implement plan as part of ongoing technology maintenance.

**Who:** Technology Coordinator

**Technical Support Goal 3 of 5:** Coordinate use and management of Computer Lab.

**Objective 1 of 3: Review and implement policies for computer use and maintenance in the Computer Lab and across district.**

**Benchmarks:** Review plan on yearly basis and make incremental changes where necessary.

**Who:** Technology Coordinator

**Objective 2 of 3:** Establish Computer Lab schedule, signup sheet and usage tracking.

**Benchmarks:** Lab schedule coordinated with classroom use and posted or published.

**Who:** Teaching staff, Technology Coordinator and administration

**Objective 3 of 3:** Identify specific lab configuration needs, such as desks, chairs, peripherals and equipment. Order and install.

**Benchmarks:** At end of each school year, identify needs with purchase request to Superintendent/Principal. Summer prior to subsequent school year install approved equipment. By February Board of Trustees meeting of every year, put together list of equipment needs to be presented to the Board for budget consideration.

**Who:** Technology Coordinator conducts needs assessment and presents purchase request to Superintendent/Principal. Superintendent/Principal reviews request and forwards to Board of Trustees for review as part of annual budget.

**Technical Support Goal 4 of 5:** Identify resources needed to successfully integrate technology into curriculum

**Objective 1 of 3:** Conduct hardware and software inventory to establish what technology equipment currently exists.

**Benchmarks:** Yearly, before first day of school year.

**Who:** Technology Coordinator

**Objective 2 of 3:** Interview teaching staff to ascertain computer proficiency and tools/professional development required by staff. Track development of staff computer proficiency.

**Benchmarks:** Staff interviews completed, preferably on a minimum day devoted to technology in October of each year, during which the Technology Coordinator would interview each member of the teaching staff regarding his/her proficiency and professional development needs. At least once per year, each staff member should log onto CTAP<sup>2</sup> and update their proficiency profile. This can be done during professional development in-service or at the staff member's leisure.

**Who:** Each teaching staff member has responsibility for updating CTAP<sup>2</sup>

**Objective 3 of 3:** Research and identify example technology-based curriculum at each grade level

**Benchmarks:** See Curriculum section, Goal 1, for timeline and details.

**Who:** Technology Coordinator works with teaching staff to identify resources and possible curriculum-based technology projects.

**Technical Support Goal 5 of 5:** Conduct annual technology inventory; plan and implement rotating technology upgrade program.

**Objective 1 of 2:** By beginning of every school year, conduct a technology inventory to document all technology equipment, its location and condition.

**Benchmarks:** By first day of school year a technology inventory has been completed and needs assessment put together based on this inventory.

**Who:** Technology Coordinator.

**Objective 2 of 2:** By first day of school year, using the current technology inventory, design a rotating technology upgrade program so that budgeting for technology upkeep can be normalized from year to year.

**Benchmarks:** New equipment purchased on a rotating basis, with special items purchased as needed.  
**Who:** Technology Coordinator puts together and oversees rotating technology update program.

## Infrastructure Goals, Objectives and Benchmarks

Infrastructure work consists largely of one-time costs to build out an appropriate computer lab in the Learning Center.

### Goals relating to Infrastructure:

**Infrastructure Goal 1 of 2:** Purchase and install secure, ventilated server cabinets in office storage room and in tech lab.

**Objective 1 of 1:** By the first day of 2006-7 school year purchase and install secure, ventilated server cabinets in office storage room and in tech lab.

**Benchmarks:** Secure, ventilated server cabinets will be installed in office storage room and in tech lab.

**Who:** Technology Coordinator.

**Infrastructure Goal 2 of 2:** Improve ventilation and temperature control in the Computer Lab.

**Objective 1 of 2:** By beginning of 2006-7 school year purchase and install effective means for managing ventilation and temperature in the Computer Lab.

**Benchmarks:** Research and design ventilation methods.

**Who:** Technology committee, Technology Coordinator and ventilation consultant (if necessary); findings presented to the Board for funding approval.

**Objective 2 of 2:** Purchase and install new ventilation.

**Benchmarks:** By beginning of 2006-7 school year have new ventilation installed and functional.

**Who:** School maintenance staff, Technology Coordinator and/or local contractor(s).

# Hardware Goals, Objectives and Benchmarks

Hardware is the most visible and easiest aspect of a technology program to plan and manage.

## **Goals relating to Hardware acquisition, installation, maintenance and management:**

**Hardware Goal 1 of 6:** Review and refine hardware support and management policies that ensure computer resources are functional and up-to-date.

See Technical Support Goal 2, above.

**Hardware Goal 2 of 6:** Conduct annual technology inventory; plan and implement rotating technology upgrade program.

See Technical Support Goal 5, above.

**Hardware Goal 3 of 6:** Upgrade cabling for network connection between the Bolinas campus and Stinson campus.

**Objective 1 of 1:** Upgrade network cabling between radio transceiver dish and Stinson campus to enhance reliability of network connection between the Bolinas and Stinson campuses.

**Benchmarks:** By beginning of 2006-7 school year, network cable will be suspended off of ground between poles and away from obstructions such as tree branches.

**Who:** Technology Coordinator

**Hardware Goal 4 of 6:** Cell phone for Technology Coordinator to improve communication and response time.

**Objective 1 of 1:** Purchase cell phone that provides good cell service throughout the district and Marin County.

**Benchmarks:** By the beginning of the second Plan year purchase cell phone and put into use.

**Who:** Technology Coordinator with Board/Administration approval

**Hardware Goal 5 of 6:** Replace expensive to operate inkjet printers with more economical high-use laser printer(s).

**Objective 1 of 1:** Purchase new laser printer(s).

**Benchmarks:** By the beginning of the 2006-7 school year purchase sufficient laser printer(s) to provide all staff convenient access to low-cost, high-quality laser printing.

**Who:** Technology Coordinator, Administration/Board approve purchase

**Hardware Goal 6 of 6:** Purchase additional laptop computers for teaching staff to improve accessibility to technology and better integrate technology into instruction.

**Objective 1 of 1:** Research teacher needs and requirements and purchase computers to meet those needs.

**Benchmarks:** By the end of the 2006-7 school year purchase additional laptops so that each teacher has a laptop to improve technology accessibility and instruction.

**Who:** Technology Coordinator, Administration/Board approve purchase

## Software Goals, Objectives and Benchmarks

Software is the most elusive, invisible and difficult to manage of all technology resources. There are copyright and security issues, virus problems and ongoing maintenance needs. Most people don't think of software as requiring maintenance, but it is functionally the most significant piece of computer technology while at the same time having the most fluid aspect. It is critical to manage software with great care.

### **Goals relating to Software acquisition, installation, maintenance and management:**

**Software Goal 1 of 2:** Revise and amend policies for purchasing, maintaining and providing access to software.

**Objective 1 of 2:** By end of 2006-7 school year review and amend policies for purchasing and maintaining software to be used for educational purposes by school staff and students. Software archived and managed from networked software server will be audited.

**Benchmarks:** All software used in the school for educational purposes will be archived on a networked server. Software will be reviewed for conformance to policy before being placed on the server.

**Who:** Technology Coordinator writes policy and implements policy in conjunction with the Superintendent and the Technology Committee.

**Objective 2 of 2:** By end of 2006-7 school year review and amend policies for providing access to software and other software server-resident system functions.

**Benchmarks:** By end of 2006-7 school year policies are in place for secure access management of district software server and server-resident system functions.

**Who:** Technology Coordinator writes and tests software server access policies.

**Software Goal 2 of 2:** Review and update software archive on Learning Network server that allows all district Learning Network computers to access legal copies of software.

**Objective 1 of 2:** By end of 2006-7 school year review and update secure access procedures to allow school staff and students to access software from secure software archive server.

**Benchmarks:** By end of 2006-7 school year all specialized software program installations used for educational purposes in the district will reside on a networked software server, but commonly used software will be installed on each machine locally for best performance. Access to district educational software and software server functions will be securely managed.

**Who:** Technology Coordinator implements access security with help from MCOE technology consulting services where necessary

**Objective 2 of 2:** By end of 2006-7 school year review and amend software maintenance plan. Inventory all software available on software server yearly to determine if the software is being used, whether the software is current, and provide updates to actively used software where necessary.

**Benchmarks:** Yearly software inventories are carried out to keep actively used software up-to-date and archive unused software.

**Who:** Technology Coordinator oversees software maintenance procedures

## **5e. Monitoring and Evaluation of Infrastructure Component**

This is a small rural school district with only 10 teachers and an active committee of community volunteers.

The Technology Coordinator puts together and oversees rotating technology upgrades and updates to the program, as defined by the Technology Advisory Committee. He works with teaching staff to identify resources and possible curriculum-based technology projects. The Technology Coordinator conducts equipment needs assessments and presents purchase requests to Superintendent/Principal. The Superintendent/Principal reviews purchase-requests and forwards them to the Board of Trustees for review as part of annual budget. The Technology Advisory Committee meets monthly, monitors implementation of the technology plan and makes recommendations for modifications, as needed.

## 6. Funding and Budget

### 6a. Established and potential funding sources

Most of the district funding for technology comes from the District's General Fund. In the past, the district had a \$25,000 grant for technology funding, which was used to purchase much of the equipment.

Going forward, there are a number of funding opportunities in addition to traditional district funding to support our technology program over time. Among these are federal, state and local education and technology grants, local fundraising events and community endowments. We currently receive annual Formula Funding a federal EETT (Enhancing Education Through Technology) Grant. We also receive discounts on Phone and Internet services through Basic E-Rate.

The governor currently has a new Digital Classroom Initiative in his proposed 2006/2007 budget that would provide \$3,000 in technology funding per classroom. We will monitor this development to determine district eligibility.

We will be exploring partnerships with local businesses for funding, technical support and instructional opportunities, while respecting the necessarily independent course of our educational vision.

The district is exploring cost/benefit of hiring a part-time grant writer to improve district awareness of and effectiveness in attracting grant money, and will be working with MCOE grant writers where possible. We are also exploring the idea of using a program-marketing manager to help establish endowments to support targeted programs.

### Program Budget Needs

The Technology Advisory Committee evaluated progress on the three-year plan that expires this year and made the following recommendations. These needs are reflected in the annual budget.

1. Move the \$18,000 annual technology maintenance expenditure to a line item in the district's General Fund.
2. Increase annual spending on software from the current \$1,000 to \$3,000 to build a library of standardized, quality educational software.
3. Approve the position of a computer lab aide to cover peak periods of usage on days when the Technology Director is not there.

### **Containing Costs of the Technology Program**

We plan on employing a number of strategies to reduce potential costs of implementing and maintaining our district technology program. First, the purchase of equipment will be done through the MCOE, which has academic purchasing and maintenance contracts with popular equipment, hardware and software vendors that significantly reduce cost of hardware and software. In addition, the MCOE offers reduced cost professional development courses covering computer technology that we plan to use extensively, and may be able to provide educational and administrative software.

CTAP Region IV provides many free training opportunities for teachers and will be subsidizing web-based subscriptions to Atomic Learning and Nettekker D.I. for our district. Technology training will also be integrated with content and instructional methods training where possible, and will be augmented using online CTAP training materials. Volunteers will be used in the school where appropriate to augment Technology Coordinator. Leasing of equipment will be explored for financial benefit. And closer management of contracted services will result in more efficient and effective use of this time.

### **6b. Technology Annual Budget (2006-2011)**

<b>Description</b>	<b>Amount</b>
* Hardware/Software purchases and upgrades/licensing: \$25,000/year.	\$25,000/year
* Technology Aide: \$7,500/year for 6 hrs/week during the school year.	\$7,500/year
* Technology Specialist This is a 12-month, 30 hr/week position. (Includes cost of benefits).	\$76,000/year

## **Funding and Budget Goals, Objectives, & Benchmarks**

We begin the funding and budget goals, objectives and benchmarks section with goals pertaining to technology program funding and cost reduction options. These are arguably the most important aspects of the program. Without adequate funding, there will not be a viable technology program. Following these, specific funding and budget goals are stated for each component of the Plan requiring funding. This section is broken down into one-time costs and recurring costs.

### ***Goals relating to funding sources:***

**Funding Sources Goal 1 of 3:** Evaluate cost of technology program and impact on district budget to plan for needed funding

**Objective 1 of 1:** Ensure funding requested for educational technology is in line with the district's overall vision, policies, goals and budget for support of its staff and education of its students.

**Benchmarks:** During each yearly budget cycle, the Superintendent/Principal and Board of Trustees evaluate the technology component of the overall district budget to ensure funding requested for educational technology is in line with the district's overall vision, policies and goals, and make recommendations/amendments to the educational technology budget component based on that evaluation. These recommendations and/or amendments should be communicated clearly to the Technology Committee and Technology Coordinator for their response and action.

**Who:** Superintendent/Principal and Board of Trustees review technology education budget component and communicate recommendations and/or amendments to the Technology Committee and Technology Coordinator who respond and take action based on this input.

**Funding Sources Goal 1:** District reviews contracting part-time grant writer to apply for applicable technology grants, and other grant opportunities

**Objective 1 of 1:** District Superintendent/Principal and Board of Trustees reviews district's grant application process and success against available grant moneys to determine if a grant writer could be cost effective.

**Benchmarks:** By the beginning of 2002-3 school year, if financially viable, Superintendent/Principal makes recommendation to Board of Trustees to contract grant writing services for district

**Who:** Superintendent/Principal makes recommendation to Board

### ***Goals relating to cost-reduction options:***

**Cost Reduction Goal 1 of 2:** Purchase equipment through MCOE, state or other purchasing groups to reduce costs of hardware and software

**Objective 1 of 2:** Research most cost-effective equipment purchasing channels, including leasing and maintenance costs

**Benchmarks:** During purchasing cycle in each Plan year, district-purchasing agent consults with MCOE to determine most cost effective purchasing channels

**Who:** District purchasing agent working with Superintendent/Principal

**Objective 2 of 2:** Purchase equipment, computer hardware, software and infrastructure components through most cost effective channels

**Benchmarks:** For each Plan year, technology program components should be purchased and delivered to the district in time for installation before the first day of school

**Who:** District purchasing agent working with Superintendent/Principal, Technology Coordinator and Technology Committee

**Cost Reduction Goal 2 of 2:** Use MCOE and California Department of Education (CDE) technology courses as part of professional development curriculum

**Objective 1 of 2:** Contact MCOE and CDE to research professional development opportunities available for technology training

**Benchmarks:** During first Plan year, research professional development courses available and begin planning of staff participation. In following Plan years, professional development technology courses should be scheduled by beginning of school year as part of the district scheduling process.

**Who:** Technology Coordinator with support from Technology Committee where necessary and review by Superintendent/Principal, evaluates courses available

**Objective 2 of 2:** Schedule district staff participation in DOE professional development technology courses on as-needed basis

**Benchmarks:** Beginning in first Plan year and continuing in each Plan year following, professional development technology courses are attended by staff members

**Who:** Technology Coordinator with support from Technology Committee where necessary and review by Superintendent/Principal, evaluates courses available and makes recommendations according to individual staff needs

***Goals relating to funding priorities for each component of the plan:***

**Component Funding and Budget Goal 1 of 3 :** Allocate funds to purchase classroom computers to replace all obsolete equipment and bring all classrooms into conformance with district guidelines of 1 classroom computer per every 10 students in each classroom

**Objective 1 of 2:** Complete inventory of classroom computers and determine which ones are obsolete

**Benchmarks:** Technology equipment inventory completed at end of each school year. By end of second Plan year, make all necessary upgrades to classroom computers.

**Who:** Technology Coordinator conducts interview and makes recommendations to Superintendent/Principal

**Objective 2 of 2:** Board of Trustees reviews recommendations and approves funding to bring all classroom computers up-to-date

**Benchmarks:** By beginning of second Plan year: Board of Trustees reviews and approves funding for replacing all obsolete classroom computers, at the same time bringing all classrooms into compliance with district guidelines of 1 computer per every 10 students

**Who:** Superintendent/Principal makes recommendation, Board of Trustees approves

**Component Funding and Budget Goal 2 of 3:** Allocate funds for ongoing repair and maintenance of equipment and equipment rotation program to normalize replacement schedule of obsolete equipment

**Objective 1 of 1:** By beginning of first Plan year, and each budget cycle thereafter: Board of Trustees reviews and allocates funds for repair, maintenance and replacement of obsolete equipment; current estimate based on 45 active computers and other educational technology tools: \$10,000/year

**Benchmarks:** By beginning of first Plan year: Superintendent/Principal recommends and Board of Trustees approves funding for repair, maintenance and replacement of obsolete equipment on an ongoing basis. At the end of each following year: Technology Coordinator evaluates maintenance, repair and replacement needs for coming year and makes budget recommendation to Superintendent/Principal, who in turn makes recommendation to the Board of Trustees during the annual budget review.

**Who:** Based on district Technical staff input Superintendent/Principal makes recommendation, Board of Trustees approves

**Component Funding and Budget Goal 3 of 3:** Allocate funds to purchase computer hardware and software required to computerize school library catalog.

**Objective 1 of 2:** Identify resources needed to computerize school library catalog system and determine costs associated with each resource

**Benchmarks:** In second Plan year: research and get costs associated with computerizing the district library catalog. Make sure costs include any staff overtime or contracted work.

**Who:** District Librarian working with Technology Coordinator and Technology Committee (if necessary)

**Objective 2 of 2:** Board of Trustees allocates funding to computerize district library catalog.

**Benchmarks:** By beginning of third Plan year: Budget has been reviewed and accepted by Board of Trustees and identified and approved

**Who:** Superintendent/Principal makes recommendation, Board of Trustees approves

***Timeline of Suggested Action Steps for Funding and Budget***

<b>Action Step</b>	<b>Person Responsible</b>	<b>Completion Date</b>
Identify all costs associated with implementing each component.	Larry Enos, Frank Wells, Tom Williard	7/2006
Identify the current budget for implementing each component.	Larry Enos, Tom Williard	7/2006
Identify established and potential funding sources, present and future.	Board of Trustees, Technology Comm., Larry Enos	7/2006 Ongoing
Consider options for reducing costs.	Board of Trustees, Technology Comm., Larry Enos	Ongoing
Develop and implement annual budgets for the term of the plan (three to five years).	Larry Enos, Technology Comm., Board of Trustees	Each year, Budget proc.
Plan for the obsolescence of equipment.	Larry Enos, Technology Coordinator	Ongoing
Establish a feedback loop to monitor and improve progress.	Larry Enos, Tech. Comm., Tech. Staff	Ongoing

**6d. Replacement Policy for Obsolete Equipment**

Obsolete equipment is equipment that no longer meets the needs of the students or staff, or has become unreliable in its operation. Often age of equipment is a good indicator of its abilities, but not its usefulness. It is therefore extremely important that we have a system for monitoring the performance of equipment versus its requirement, and for replacing equipment that no longer meets its requirements.

The classroom teachers, technology coordinator and technology advisory committee are the primary determiners of need. Once it is agreed that the equipment no longer meets those needs or has become unreliable, it is replaced with new, upgraded and/or refurbished equipment. Priority will be given to replacing equipment for current needs over upgrading equipment for expansion of services provided.

## 6c. Funding and Budget Monitoring and Evaluation

Here we address any Funding and Budget monitoring and evaluation issues not covered in the goals, objectives and benchmarks above.

### *Monitoring Modification of Physical Plant and Acquisition of Equipment*

Modification of physical plant and acquisition of equipment requires Board of Trustees action to approve funding. During the budget review of these items, monitoring and evaluation parameters will also be reviewed by the Board. The district Superintendent/Principal is responsible for budget and monitoring/evaluation recommendations and implementation. Some of that responsibility will be shared with the district's Technology Committee.

### *Budget Review*

Funding and budget for the district's technology program will be reviewed annually by the Board of Trustees as part of its regular budget review process. Budget recommendations are compiled by the district Superintendent/Principal for the Board's consideration, based on input from Technology Coordinator and the district Technology Committee.

### *Steps taken if Funding and Budget component cannot be implemented per Plan*

There are a number of scenarios in which funding and budget would not be implemented per plan, each requiring a different response:

1. **Adequate funding is not approved by the Board of Trustees** – this could happen for the following reasons:
  - a. Because there are not enough funds available to cover technology costs – there are two responses to this issue that could be employed individually or together to
    - i. Identify outside funding sources to make up budgetary shortfall. These could be grants and/or community fund raising, and may include grant writing consulting services.
    - ii. Revise the Plan to reduce budgetary requirements, bringing it in line with available funding. Technology program priorities would be reviewed to identify the appropriate sequence of implementation given budgetary constraints.
  - b. Because they are not convinced that technology costs are offset by benefit – this scenario is unlikely, as we are working to keep the Board informed of Plan contents as the process unfolds. However, if this is the case, the Superintendent/Principal and Technology Committee would meet with the Board to identify Board concerns. Where necessary, the Plan would be clarified/modified and educational opportunities for the Board would be arranged to allow them to see appropriate use of technology in schools.
2. **Funding is contingent upon future fund-raising events that are not entirely under the district's control, such as grants or community fund raising.** In this case the budget shortfall would be evaluated and fundraising activities planned. If

the budget shortfall could not be offset by reliable outside funding sources, technology program priorities would be reviewed to identify the appropriate sequence of implementation given budgetary constraints.

3. **Detailed budget requirements to implement the Plan are not available for the district's annual budget review.** We do not anticipate this problem, as budget information for technology plan components is readily available. If this does occur, the district Superintendent/Principal, working with the Technology Committee and MCOE, would compile the needed information ASAP and present it for Board of Trustees consideration at the next regularly scheduled meeting.

## 7. Monitoring and Evaluation

The overall effectiveness of our technology program and adherence to Technology Plan goals and objectives will be evaluated on an annual basis. The evaluation will use input from representatives of each of the Plan's significant impact areas within the district community and area high schools that receive students graduating from the Bolinas-Stinson schools. By gathering input from all stakeholders the Plan's effectiveness can be evaluated on all fronts and decisions made to optimize its impact overall, while keeping technology program funding requirements to a minimum. In addition, the district's Technology Coordinator will conduct mini-reviews each trimester to ensure adequate progress is being made toward Plan goals, objectives and benchmarks during the school year.

The annual technology program review is a two-step process. In the first step, input from representatives of all significant stakeholders in the district community as well as county high schools directly affected by the technology program will be collected and analyzed by the Technology Coordinator and Technology Committee. Use and effectiveness of the technology program and adherence to Plan goals and objectives will be determined. Based on this annual review, recommended amendments to the plan/program will be presented to the Superintendent/Principal by Technology Coordinator (and Technology Committee where necessary) during the annual budget planning process.

The second step in monitoring and evaluation of the education technology program will be review of the education technology component by the Board of Trustees as part of its annual budget process. Outcomes of the budget process may impact the technology program; any changes to program funding coming out of the budgetary process will be analyzed by the Technology Coordinator and Technology Committee who will recommend changes to the technology program and this Plan. Changes accepted by the Superintendent/Principal will be implemented and the Plan updated.

Review of progress toward benchmark standards for staff and students established earlier in this document will be assessed using a number of tools. For staff, we will be monitoring progress against our benchmark standards through the annual use of CDE's **Ed Tech Profile** online assessment tool. For assessment of student development, we will be using a series of tools including educational software and internally developed exercises to measure student progress. Student monitoring will be embedded in computer technology curriculum put together and taught by the district Technology Coordinator. CTAP staff will be consulted in establishing our computer technology curriculum to meet our benchmark standards. In addition, area high schools that receive our graduating eighth graders will be queried annually to determine if students are appropriately prepared for educational technology use in the high school environment. Finally, one the goals of the Alumni Association (currently being organized) is to facilitate graduate follow-up studies.

## Timeline of Suggested Action Steps for Monitoring and Evaluation

Action Step	Person Responsible	Completion Date
Review the implementation monitoring process included under each component of the plan.	Technology Comm., Technology Coordinator, Superintendent	Annually, end of Each School Year
Determine how to evaluate the impact of technology on student learning.	Technology Coordinator, Technology Comm., Superintendent	Annually, end of Each School Year
Research and consider monitoring and evaluation tools provided at little or no cost to the school district.	Technology Coordinator Technology Comm.,	Annually, end of Each School Year
Design a schedule for evaluating the effect of plan implementation	Technology Comm., Technology Coordinator, Superintendent	Annually, end of Each School Year
Determine how and when the results of the monitoring process and evaluation will be used.	Technology Comm., Technology Coordinator, Superintendent	Annually, end of Each School Year

## 8. Effective Collaborative Strategies With Adult Literacy Providers

The Bolinas-Stinson Union School District is a small, rural elementary school district. We do not have the internal resources to be an adult literacy provider and have not received any requests for these services from the community. However, we realize someone may move into the community who has a need for some form of adult literacy service or a local resident could be identified in the future. Residents of the school district have the opportunity to participate in two excellent programs that are designed to improve adult literacy in the community. The school district staff works closely with both programs to ensure that parents and community members have access to high quality adult literacy programs.

The Tamalpais Union High School District offers community education programs. There are no eligibility requirements. Classes are scheduled quarterly and information is mailed to every resident of the District. Courses offered include a variety of computer literacy classes to assist participants in acquiring basic proficiency to more advanced learning.

The Marin Community College District offers Adult Computer Literacy Courses open to adults in our community. Eligibility requirements are that the participants are eighteen years old. Courses offered include a variety of computer literacy classes to assist participants in acquiring basic proficiency to more advanced learning. Support for Spanish-speaking community members and community members with special needs is available.

In addition, other agencies such as the Marin Education Resource Center (MEC), the Marin Conservation Corps, the Canal Community Alliance, and Homeward Bound of Marin offer community-based adult literacy, ESL and GED programs. The Marin Literacy Program has served over 7,400 learners at 60 different sites since 1985. These site extensions of Project Read include libraries, churches, business offices, retirement communities, social service agencies, dairy ranches and private homes.

The Bolinas-Stinson Union School District technology committee will meet with local adult literacy providers to share information about our technology plan, find ways the adult literacy providers are currently incorporating technology into their curriculum and will collaborate to identify ways a satellite service could be provided to our community.

## 9. Effective, Research-Based Methods & Strategies

### **Integration of Research-Based Methods**

*Description of how education technology strategies and proven methods for student learning, teaching, and technology management are based on relevant research and effective practices.*

Bolinas-Stinson Union School District developed its model for student learning, teaching, and technology management using research based methods and effective practices found in the June 2001 CEO Forum, *School Technology and Readiness Report: Key Building Blocks for Student Achievement in the 21<sup>st</sup> Century*. Consistent with the research, Bolinas-Stinson Union School District carefully analyzed learning resources and lessons both for alignment to California Content Standards and for the ability to measure growth/achievement on the standards in a variety of ways.

The School Technology and Readiness Report concludes that effective uses of technology to enhance student achievement are based on four elements:

- (1) Alignment to curricular standards and objectives
- (2) Assessment that accurately and completely reflects the full range of academic and performance skills
- (3) Holding schools and districts accountable for continuous evaluation and improvement strategies
- (4) An equity of access across geographic, cultural, and socio-economic boundaries

Through ongoing data collection and analysis, the Bolinas-Stinson Union School District will continuously monitor its attainment of the goals and objectives of the Educational Technology Plan, and will report results annually to the superintendent, school board, and public. Throughout the plan, attention is paid to providing equitable access to all students in our community, including student in special populations.

CEO Forum. (2001, June). The CEO Forum school technology and readiness report: *Key building blocks for student achievement in the 21st century*.  
<http://www.ceoforum.org/downloads/report4.pdf>

***Description of thorough and thoughtful examination of externally or locally developed education technology models and strategies***

The What Works Computer Database resources will be utilized and incorporated as appropriate to ensure that the education technology program in the Bolinas-Stinson Union School District is consistent with current scientifically based research regarding technology, teaching, and learning. All software selected will be evaluated for its ability to support the five key literacy components (phonemic awareness, phonics, vocabulary, fluency, and comprehension), and will follow the “assess, align, instruct, and evaluate” model to target instructional activities based on students’ needs.

Annually, the School Site Council will examine the studies in the What Works Computer Database. The What Works clearinghouse, funded by the US Department of Education, will provide the following easily accessible and searchable online databases:

- (1) An educational interventions registry that identifies potentially replicable programs, products, and practices that are claimed to enhance important student outcomes, and synthesizes the scientific evidence related to their effectiveness
- (2) An evaluation studies registry, which is linked electronically to the educational interventions registry, and contains information about the studies constituting the evidence of the effectiveness of the program, products, and practices reported
- (3) An approaches and policies registry that contains evidence-based research reviews of broader educational approaches and policies
- (4) Test instruments registry that contains scientifically rigorous reviews of test instruments used for assessing educational effectiveness. An evaluator registry that identifies evaluators and evaluation entities that have indicated their willingness and ability to conduct quality evaluations of education interventions.

**9c. Using Technology to Deliver Courses and Curricula**

*Description of development and utilization of innovative strategies for using technology to deliver 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)*

The Bolinas-Stinson Union School District works closely with the Tamalpais High School District regarding articulation of academic courses. The Tamalpais High School District has established exit outcomes in the area of technology that are based upon research and effective practices. Middle school teachers coordinate instruction to ensure that students have access to essential building block strategies. The Bolinas-Stinson Union School District is involved in a distance learning pilot project through the Marin County Office of Education. As a result, students are communicating with other schools in the bay area as part of the Digital California Project. A key partner for our district has

been the California Parks Service and all partners are using State Standards and CEO Forum effective strategies.

## **Additional References**

### 1) Integration within the curriculum framework:

“And in the ACOT study, student engagement remained highest when technology use was integrated into the larger curricular framework, rather than being an “add-on” to an already full curriculum.”

Sandholtz, J. H., Ringstaff, C., & Dwyer, D. C. (1997). *Teaching with technology: Creating student-centered classrooms*. New York: Teachers College Press.

### 2) Integration with curriculum framework strengthens information literacy skills:

“Moreover, using technology within the curriculum framework can enhance important skills that will be valued in the workplace, such as locating and accessing information, organizing and displaying data, and creating persuasive arguments.”

Critical issue: Using technology to improve student achievement. (1999). Retrieved March 12, 2001, from North Central Regional Educational Laboratory Web site: <http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te800.htm>

### 3) Mathematics:

Mathematics courses that emphasize small-group processes, analyses of real-world situations, the use of computational tools, and incorporate adaptive tutoring software into the curriculum can result in improved mathematics skills as measured by standardized assessments. These types of courses also result in improved problem-solving skills and enhanced ability to translate between equivalent representations of algebraic content.

Koedinger, K., Anderson, L.k Hadley, W., & Mark, M., (1997). *Intelligent Tutoring Goes to School in the Big City*. Pittsburg, PA: Human-Computer Interaction Institute, Carnegie Mellon University.

### 4) Basic Skills Supplemental Courses:

“Integrated learning programs should be considered as a supplement for the systematic development of basic academic skills but should not replace project-based activities that are designed to teach students the relevance and application of the basic skills as they are mastered.”

Mann, D., Shakeshaft, C., Becker, J., & Kottkamp, R. (1998). *West Virginia Story: Achievement gains from a statewide comprehensive instructional technology program*. Santa Monica, CA: Milken Exchange on Educational Technology.

### 5) Drill and Practice Software:

As a result of these meta-analyses, many conclude that computer-assisted instruction and drill-and-practice software can significantly improve students’ scores on standardized

achievement tests (Kulik, 1994; Sivin- Kachala & Bialo, 2000), in all major subject areas, preschool through higher education (Coley, 1997).

6) Technology Integration and Student Achievement:

“In an eight-year longitudinal study of SAT-I performance at New Hampshire’s Brewster Academy (Bain& Ross, 1999), students participating in the technology-integrated school reform efforts (School Design Model) demonstrated average increases of 94 points in combined SAT I performance over students who participated in the traditional school experience.”

Bain, A., & Ross, K. (1999). School reengineering and SAT-I performance: A case study. *International Journal of Education Reform*, 9(2), 148–153.

7) Staff Developing in Improving Student Achievement:

“...results of over 300 studies of technology use, authors concluded that teacher training was the most significant factor influencing the effective use of educational technology to improve student achievement. Specifically, the report states that students of teachers with more than ten hours of training significantly outperformed students of teachers with five or fewer training hours.”

Sivin-Kachala, J., & Bialo, E. (2000). 2000 research report on the effectiveness of technology in schools (7th ed.). Washington, DC: Software and Information

## **Appendix A: Student Technology Performance Standards**

The Bolinas-Stinson Union School District's long-term technology goal states that by the year 2005, all students by the completion of 8th grade will be able to use technology as a tool to access information, analyze and solve problems and communicate ideas. Specific technological skills are developed within each grade level to meet 2nd grade, 5th grade and 8th grade benchmark standards. These skills are integrated within each classroom's own curriculum.

By the end of eighth grade each student will have had access to the resources and education necessary to develop the skills required to pass the Tamalpais High School Exit Exam if he/she so desires.

### **Benchmark Standards for Grades K-2**

*Kindergarten through 2<sup>nd</sup> grade students will:*

- understand basic functions of mouse, keyboard, monitor and printer to successfully operate a computer
- practice responsible and ethical use of technology systems and software
- communicate about technology using developmentally appropriate and accurate terminology
- use developmentally appropriate multimedia resources and educational software for problem solving, communicating and expressing thoughts or ideas to enhance curriculum under guidance of teacher
- work cooperatively and collaboratively with peers

### **Benchmark Standards for Grades 3-5**

*3<sup>rd</sup> through 5<sup>th</sup> grade students will:*

- use keyboards and other common input/output devices effectively
- begin to develop basic typing skills
- understand and demonstrate ethical, responsible uses of technology including email
- perform such basic operations as startup; opening and closing files and programs; formatting, saving, and printing information and work; and shutdown
- use productivity tools and peripherals to support and facilitate learning throughout the curriculum
- use technology tools for individual and collaborative communication and project development for multiple audiences
- use multiple technology resources effectively to access information, communication with others, and participate in collaborative problem-solving activities

- understand common uses of technology, determine when the use of technology is applicable, and select the appropriate tool(s)
- evaluate the accuracy, relevance, and reliability of electronic information

## Benchmark Standards for Grades 6-8

### *6th through 8th grade students will:*

- Exhibit legal and ethical behavior when using information and technology, and understand the consequences of misuse.
  - All sixth grade students will pass a test administered in computer lab concerning legal and ethical issues.
  - Students at all grade levels will comply with “Internet Acceptable Use” and “Technology Rules of Responsible Use” policies (Technology Plan Appendix D).
- In sixth grade complete a computer-based project which includes the use of internet resources and involving the evaluation of the accuracy, relevance, and reliability of electronic information sources.
- Design, develop, publish, and present projects using technology to demonstrate and communicate curriculum concepts to audiences.
  - All formal written work at the eighth grade level will be word processed, published in appropriate format, and saved to the student’s password-protected folder on the school network. At the sixth and seventh grade levels, written work will increasingly be so produced.
  - Each 7<sup>th</sup> grader will make a presentation using Power Point or video.
- By the end of eighth grade have collaborated successfully with others in a cooperative learning project using a variety of technology tools and peripherals.
- By the end of eighth grade have accomplished at least one research project citing at least two internet resources.
- Be prepared to pass the Tamalpais High School District technology exit examination.

By the end of eighth grade have acquired the keyboarding/word processing skills appropriate for entering high school as demonstrated by passing a timed typing test with a calculated error-free rate of 35 words per minute.

**INFORMATION LITERACY INTEGRATION SKILLS MATRIX  
Grades 1-8**

**First Grade Information Literacy Skills Summary (end of year)**

Literature and Library

1. Kindergarten and First grade students learn to enjoy literature on a variety of topics, and to understand the need for basic library procedures such as checking out and caring for books. They become aware that the library is organized into fiction and non-fiction sections, and arranged in meaningful ways on the shelves.

Research process

2. Students are exposed to a variety of fiction and non-fiction sources of information in print and non-print formats. They understand that questions can be answered through information found in books and other media.

Technology

3. Students may know that the computer is a learning tool. They may be able to use a mouse and the return/enter key, to click on an icon, and to recognize the keyboard and cursor. No technical skills are assessed at this level, and the use of educational software in the classroom is at teacher discretion.

**Second Grade Information Literacy Skills Summary (end of year)**

Literature and Library

1. Students understand the library is a welcoming place for them to explore ideas and enjoy literature, containing books and other materials of fact and fiction in a variety of genres that are shelved by topic and alphabetically. Students have a dawning awareness of how to locate a book on the shelf and to replace it, and they know that there are rules against copying others' work.

Research process

2. Students are aware that research is a process with specific components (recognizing a question, finding and reviewing resources, organizing and presenting information), and are able to extract information from variety of materials, and produce a simple finished research product.

Technology

3. The computer is recognized as a tool that students comfortably use for writing and for learning, and which they see can be used to locate books in the library. Students can manipulate a mouse and use it to point and click on an icon. No technical skills are assessed at this level, and the use of educational software in the classroom is at teacher discretion.

### **Third Grade Information Literacy Skills Summary (end of year)**

#### Literature and Library

1. Students have the capacity to appreciate a variety of genres, and begin to identify literary elements such as plot, setting, and character. The arrangement of the library is more familiar to them and they select books on their own, and locate them on the shelves with some help from teachers and library staff. Students understand the purpose of the online catalog.

#### Research process

2. Students have explored all aspects of the research process, having used multiple printed sources, including reference books, and pre-selected web sites. They have presented results of research orally and in writing.

#### Technology

3. Keyboarding is the main focus for third graders, and students will have progressed through most lessons in a typing tutorial program by the end of the school year. Students have some word processing skills, can use a mouse, and know some computer terminology.

### **Fourth Grade Information Literacy Skills Summary (end of year)**

#### Literature and Library

1. Students recognize that there are norms for ethical use of information, such as giving credit to authors and creators of ideas using bibliographies. They generally know the types of books to be found in the non-fiction, biography, reference, and fictions sections of the library, and have begun using the Dewey Decimal system to locate materials.

#### Research process

2. Students have taken first steps in independent research: forming questions, selecting some of their own research materials, and using various strategies for analyzing and organizing information (e.g., note-taking, paraphrasing).

#### Technology

3. Students have better keyboarding skills, and have finished all lessons in the typing tutorial. They have planned, edited, and produced final products in several applications (e.g., word processed documents and PowerPoint) working both in groups and individually.

## **Fifth Grade Information Literacy Skills Summary (end of year)**

### **Literature and Library**

1. Students use their knowledge of the library's layout and organization to find fiction and non-fiction books independently, from searching the catalog to locating desired books on the shelf. They understand multiple literary genres, recognize the common parts and general organization of most books, and have completed the transition from reading picture book to chapter books.

### **Research process**

2. Students are able to navigate the research process from start to finish – i.e., they can choose and develop a topic, use multiple sources of information, find information within text, take basic notes, organize material, restate concepts and ideas in their own words, and begin to cite books and internet correctly in a simple format. Students discover that the research process may be as important as the product.

### **Technology**

3. Students are becoming competent touch typists and continue typing tutorial practice. They have used basic functions of spreadsheets, graphs, PowerPoint, and web pages. Students are familiar with common software program conventions such as icons and pull down menus. They can cut and paste, transfer pictures, save and open files repeatedly, and format text, and they know some features of Internet search engines.

## **Sixth Grade Information Literacy Skills Summary (end of year)**

### **Literature and Library**

1. Students are familiar with the middle school library, know the arrangement of fiction and non-fiction sections, and are aware of the more complex and richer reference and digital resources available. They have explored expanded searching in the catalog and advanced search capabilities within periodical databases and the Internet. Students enthusiastically explore the deeper literature collections of the middle school library.

### **Research Process**

2. Students are aware of several strategies for formulating and revising research topics, and for reviewing and extracting relevant information via note-taking. Students recognize the need for unbiased, credible, and current information, and with teacher guidance they begin to judge the value of print, media, and digital resources for their research topic. They regularly use common navigation elements to locate information within books (table of contents, indexes, etc.) and online resources (hotlinks, navigation panes, etc.).

### **Technology**

3. Students begin to manipulate text and images in multiple programs, such as emailing from online resources to themselves, and cutting and pasting from web sites to word processing documents. They can format documents (text font, size, and color), use spell check, and, with assistance, set margins and tabs when word processing. Students complete typing tutorial program.

## **Seventh Grade Information Literacy Skills Summary (end of year)**

### **Literature and Library**

1. Students confidently locate nearly all materials in the library using the catalog, and use a variety of traditional print and digital reference material (dictionary, almanac, thesaurus, atlas, encyclopedia and periodicals) to locate information for both school and personal uses.

### **Research Process**

2. Students have made progress in reviewing and analyzing materials, and in evaluating resources such as web sites for reliability, depth, currency, and value. With some teacher guidance, students can revise and refocus research questions based on initial research findings. Students are aware that copyright laws, fair use, and privacy rules govern the ethical use of information, and they understand the concept of and penalties for plagiarism and misuse of digital media.

### **Technology**

3. Students have the vocabulary and understanding to perform and discuss basic computer operations related to word processing, graphics, spreadsheets, presentation tools, and other software programs. They are aware of, and adhere to acceptable use terms.

## **Eighth Grade Information Literacy Skills Summary (end of year)**

### **Literature and Library**

1. Students love reading, actively seek books on topics of their choice, and respond critically and reflectively to literature. They use the library catalog effectively, and consider the library an integral part of the school.

### **Research process**

2. Students have a mature understanding of the research process and understand it has equal importance as the product. They are able to formulate and revise questions to guide their research, find and evaluate possible resources (both print and digital) for quality and appropriateness, cite sources correctly (both print and digital), and create an original finished product “that emphasizes understanding over plagiarism.”

### **Technology**

3. Students are confident users of directories and search engines on the web, and of advanced search techniques on the web and in various databases. They can create spreadsheets, PowerPoint presentations, and basic web pages (integrating digital images such as graphics, movies, music, scanned images, etc.) and can keyboard competently at least 35 words per minute. They have had experience using basic technology tools such as digital cameras, scanners and printers.

## Appendix C : TUHSD Computer Proficiency Requirements

Page 1 of 4

*Bolinas Stinson Union School District is a feeder school into the Tam Union High School District.*

### **Tamalpais Union High School District Larkspur, California COMPUTER PROFICIENCY GRADUATION REQUIREMENT**

#### **WHY HAVE A COMPUTER PROFICIENCY REQUIREMENT?**

Use of technology has become one of the basic skills for the 21st century. Our community has identified technology as one of the 14 Student Learning Outcomes: “Students will be able to use technology as a tool to access information, analyze and solve problems and communicate ideas.” This requirement has been in place for many years and students have been successful in meeting the standards. Increasingly, high school students are being required to keyboard and word process papers and reports, conduct research via telecommunications, and prepare graphic displays of data. Students who do not have basic computer skills will be at a disadvantage in their course work. We strongly urge students to develop word processing skills prior to high school and/or enroll in Introduction to Computers in the ninth grade. However, it is important to remember that this is a graduation requirement. Once a student has met the computer proficiency requirement, there are additional computer courses available to her/him.

#### **HOW CAN THE COMPUTER PROFICIENCY REQUIREMENT BE MET?**

Students must meet the standard for each of the five proficiency areas:

- 1) Keyboarding Test
- 2) Objective Test (terms and concepts)
- 3) Word Processing Exercise
- 4) Spreadsheet Task
- 5) PowerPoint Task

The Introduction to Computers course covers all these components and provides opportunities for students to demonstrate their proficiency. Most students fulfill the graduation requirement this way. Students with computer skills may be able to demonstrate proficiency by taking the Challenge Exam in the spring of the 8th grade (before entering high school) or during high school. A testing schedule and registration form are available on the district website at [www.tamdistrict.org/forms/comprof-reg.pdf](http://www.tamdistrict.org/forms/comprof-reg.pdf)

Students with IEPs or 504 plans should have a clear plan for appropriate accommodations or modifications of this requirement. If you have any questions regarding the Computer Proficiency Challenge Exam, please call the Office of Instructional Services at (415) 945-3704.

#### **COMPUTER PROFICIENCY TESTING GUIDELINES**

##### **KEYBOARDING TEST**

- Each student must type from a prepared manuscript for a full three minutes.
- Each mistake in the following areas is counted as one error: spelling, typing, punctuation, spacing (leaving no spaces or putting two spaces between words), indentations,

capitalizations, inconsistent spacing between sentences (either one or two spaces is acceptable as long as it is consistent).

- Typing double words, word omissions, and word additions are also errors (each
- word omission and/or word addition counts as one error).

**CRITERIA FOR PASSING:**

- 25 words per minute with 3 or fewer errors.
- 33 words per minute with 4 or fewer errors.
- 42 words per minute with 5 or fewer errors.
- 50 words per minute with 6 or fewer errors.
- 58 words per minute with 7 or fewer errors.
- 66 words per minute with 8 or fewer errors.
- 75 words per minute with 9 or fewer errors.
- 84 words per minute with 10 or fewer errors.
- 

**OBJECTIVE WRITTEN TEST**

- Each student must correctly answer a series of objective (multiple-choice) test questions.
- Questions will cover general computer information: hardware, software, information literacy, file management, Internet/networks, e-mail, viruses/spyware, and ethics/security.

**CRITERION FOR PASSING:** 75% correctly answered questions (30 out of 40 questions).

**WORD PROCESSING TEST**

The agreed upon standard is the creation of a quality document which contains no more than two errors. Students may use the block business letter format guidelines during the exam.

- Each student must use Microsoft Word to type and format a block style business letter (everything starts to the left) following the directions on the test sheet.
- Each student must be able to use a word processor to change fonts, font sizes, and font styles (bold, underlining, and italics).
- Each student must be able to: use a word processor to change margin and line spacing; set, modify, and use tab stops (left, right, center, and decimal), or create and format tables; create headers; insert and format images; use justification (left, right, center, and full).
- Each student must understand the distinction between the left edge of the paper and where the text begins on the paper, as well as how these relate to margins and the ruler line at the top of the screen.
- Each student must be able to print a document.

**CRITERIA FOR PASSING: NO MORE THAN TWO ERRORS are allowed.**

Each occurrence of an error counts as one error. Errors include, but are not limited to, mistakes in the following areas: spelling; capitalization; letter duplication; word substitution; omitted or added words; punctuation; spacing between words; not using bold, italics or underlining when indicated; incorrect line spacing, margins, font size, justification, and tab placement.

**POWERPOINT TEST**

- Using Microsoft PowerPoint, each student must be able to:
- Create and modify a presentation file (given the necessary information).
- Insert new slides of the appropriate type;
- Add text as directed;
- Adjust background color, texture, gradient and pattern;
- Adjust text color, font, size and style for easy readability;
- Promote and demote text entries;
- Apply animations to text entries;
- Apply slide transitions;
- Use action buttons;
- Add an image from the Internet to a slide;
- Use the different views available, including Slide, Slide Sorter, Outline and Slide Show;
- Adjust the zoom level of the view as needed;
- Use the PrtScn and Alt-PrtScn keys to copy a screen image and place on a new slide;
- Print presentation in various ways including slides, handouts, notes and outline.

**CRITERIA FOR PASSING:** Students must be able to perform all PowerPoint functions with no more than one "typographical or proofreading" error.

**NO ERRORS are allowed in the following "function" areas**, including, but not limited to: creating new slides of the appropriate type; entering text in the appropriate area; setting background color, texture, gradient or pattern for easy readability; promoting or demoting text entries; applying animations to text entries; applying slide transitions; using action buttons, adding an image from the Internet to the screen; using the different views available including necessary zoom level; using PrtScn and Alt-PrtScn to copy a screen image and place on a new slide; printing the presentation in various ways.

**NO MORE THAN ONE ERROR is allowed in the following areas**, including, but not limited to: spelling; capitalization; letter duplication; word substitution; omitted or added words; punctuation; spacing between words; not using bold, italics or underlining when indicated. Each occurrence of an error counts as one error.

**SPREADSHEET TEST**

Using Microsoft Excel, each student must be able to:

- Create, modify and print (in both portrait and landscape orientation showing and/or hiding row and column headings and gridlines) a single spreadsheet file (given the necessary information). Within that file, students must produce and print two separate reports/layouts and one chart;
- Format cells/fields as appropriate and as indicated in the test directions including:
  - adjusting row height and column width;
  - configuring plain, bold, italic or underlined text in any required size of font;
  - entering dates using various formats;
  - positioning centered, left or right justified (aligned) text;
  - displaying numbers rounded to the proper decimal value and using commas, dollar signs and/or percents as necessary;
- Apply spreadsheet functions and/or formulas to derive all calculated values including counts, sums, differences, products, quotients, minimums, maximums, and averages;
- Enter calculated values in appropriate cells in accordance with the specified format;
- Display cells showing values (numbers) and formulas;
- Sort records by any field, both alphabetically and/or numerically in ascending or descending order;
- Use the filtering option of the program to select some records without deleting others;
- Hide/Delete specific columns;
- Create and print a report/layout that shows only selected fields and records without deleting other fields and records;
- Create and print a chart based on data included in the spreadsheet.
- Calculators and mental calculations may not be used.

**CRITERIA FOR PASSING:** Students must be able to perform all spreadsheet functions.

**NO ERRORS are allowed in the following "function" areas**, including, but not limited to: adjusting row height and column width; printing, in both portrait and landscape orientation; showing or hiding row and column headings and gridlines; entering dates using various formats; positioning centered, left and right justified text; displaying numbers rounded to the proper decimal value and using commas, dollar signs, and/or percents as necessary; applying spreadsheet functions and/or formulas to derive all calculated values including counts, sums, minimums, maximums and averages; sorting and showing/hiding records; hiding and/or deleting columns; charting proper fields and records showing appropriate chart and axis titles.

**NO MORE THAN TWO ERRORS are allowed in the following areas**, including, but not limited to: spelling; capitalization; letter duplication; word substitution; omitted or added words; punctuation; spacing between words; not using bold, italics or underlining when indicated; incorrect line spacing, margins, font, font size, justification, and tab placement. Each occurrence of an error counts as one error.

## Appendix D: Technology Inventory

### Bolinas-Stinson Union Elementary School District

Instructional Locations	Mac Desktops	PC Desktops	Mac Laptops	PC Laptops	Mac Servers	PC Servers	Injet Printers	BW Lasers	Color Lasers	Switches/Hubs		Wireless Access Points	Routers	
										#	Ports		#	Ports
K (Nichelini)	0	0	1	0	0	0	0	0	0	1	5	1	0	
1-2 (Braun/Pollak)	2	0	1	1	0	0	1	1	0	1	5	1	0	
3-4 (Kostelnik)	3	0	1	0	0	0	2	0	0	1	5	1	0	
5 (MacLaird)	3	0	1	0	0	0	0	1	0	1	5	1	0	
6 (Berry)	2	0	1	0	0	0	1	0	0	0		1	0	
7/8 (Parker)	2	0	1	0	0	0	1	0	0	1	5	1	0	
7/8 (Jolley)	1	0	1	0	0	0	1	1	0	1	5	1	0	
Tech Lab	16	4	1	0	3	1	1	1	1	8	40	1	0	
Learning Center	2	2	0	1	0	0	2	0	0	1	8	0	0	
Music	1	0	0	0	0	0	0	0	0	0		0	0	
Library	0	1	0	0	0	0	0	1	0	1	5	0	0	
Art	1	0	0	0	0	0	1	0	1	0		0	0	
<b>Totals</b>	40 Desktops		10 Laptops		4		17			16	83	8	0	0
<b>Administrative Locations</b>														
Kitchen	0	0	0	1	0	0	0	0	0	1	5	1	0	
Maintenance	1	0	0	0	0	0	1	0	0	0		0	0	
Office	1	4	0	1	0	1	5	2	0	3	21	1	1	1
<b>Totals</b>	6 Desktops		2 Laptops		1		8			4	26	2	1	1

## Appendix E: Criteria for EETT-Funded Education Technology Plans

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

- For corresponding EETT Requirements, see Appendix F.
- If the technology plan is revised, insert the Education Technology Plan Benchmark Review Form (Appendix I) at the beginning of the technology plan.
- Include this form (Appendix C) with “Page in District Plan” completed at the end of your technology plan.

1. PLAN DURATION CRITERION	Page in District Plan	Example of Adequately Addressed	Example of Not Adequately Addressed
a. The plan should guide the District’s use of education technology for the next three to five years.	8	The education technology plan describes the Districts use of education technology for the next three to five years.	The plan is less than three years or more than five years in length.
2. STAKEHOLDERS CRITERION Corresponding EETT Requirement(s): 7 & 11 (Appendix F)	Page in District Plan	Example of Adequately Addressed	Not Adequately Addressed
a. Description of how a variety of stakeholders from within the school District and the community-at-large participated in the planning process.	8-10	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, & 12 (Appendix F)	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.	<b>11</b>	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.	<b>11</b>	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 and academic content standards in various District and site comprehensive planning documents.	<b>14</b>	The plan references other District documents that guide the curriculum and/or establish goals and standards.	The plan does not reference District curriculum goals.
d. List of clear goals and a specific implementation plan for using technology to improve teaching and learning by supporting the District curricular goals and academic content standards.	<b>15-16</b>	The plan delineates clear, specific, and realistic goals and target groups for using technology to support the District's curriculum goals and academic content standards to improve learning. The implementation plan clearly supports accomplishing the goals.	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 and a specific implementation plan detailing how and when students will acquire technology and information literacy skills needed to succeed in the classroom and the workplace.	<b>17-19</b>	For the focus areas, the plan delineates clear, specific and realistic goals for using technology to help students acquire technology and information literacy skills. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to determine what action needs to be taken to accomplish the goals.
f. List of clear goals and a specific implementation plan for programs and methods of utilizing technology that ensure appropriate access to all students.	<b>20</b>	For the focus areas, the plan delineates clear, specific and realistic goals for using technology to support the progress of all students. The implementation plan clearly supports accomplishing the goals.	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.
g. List of clear goals and a specific implementation plan to utilize technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs.	<b>21</b>	The plan delineates clear, specific and realistic goals for using technology to support the District's student record-keeping and assessment efforts. The implementation plan clearly supports accomplishing the goals.	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.
h. List of clear goals and a specific implementation plan to utilize technology to make teachers and administrators more accessible to parents.	<b>21</b>	The plan delineates clear, specific and realistic goals for using technology to facilitate improved two-way communication between home and school. The implementation plan clearly supports accomplishing the goals.	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.

i. List of benchmarks and a timeline for implementing planned strategies and activities.	<b>17-21</b>	The benchmarks and timeline are specific and realistic. Teachers, administrators and students implementing the plan can easily discern what steps will be taken, by whom, and when.	The benchmarks and timeline are either absent or so vague that it would be difficult to determine what should occur at any particular time.
j. Description of the process that will be used to monitor whether the strategies and methodologies utilizing technology are being implemented according to the benchmarks and timeline.	<b>21</b>	The monitoring process is described in sufficient detail so that who is responsible, and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.
<b>4. PROFESSIONAL DEVELOPMENT COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 5 & 12 (Appendix F)	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
a. Summary of the teachers' and administrators' current technology skills and needs for professional development.	<b>22-23</b>	The plan provides a clear summary of the teachers' and administrators' current technology skills and needs for professional development. The findings are summarized in the plan by discrete skills to facilitate providing professional development that meets the identified needs and plan goals.	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.

<p>b. List of clear goals and a specific implementation plan for providing professional development opportunities based on the needs assessment and the Curriculum Component goals, benchmarks, and timeline.</p>	<p><b>25-27</b></p>	<p>The plan delineates clear, specific and realistic goals for providing teachers and administrators with sustained, ongoing professional development necessary to implement the Curriculum Component of the plan. The implementation plan clearly supports accomplishing the goals.</p>	<p>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.</p>
<p>c. List of benchmarks and a timeline for implementing planned strategies and activities.</p>	<p><b>25-28</b></p>	<p>The benchmarks and timeline are specific and realistic. Teachers and administrators implementing the plan can easily discern what steps will be taken, by whom, and when.</p>	<p>The benchmarks and timeline are either absent or so vague that it would be difficult to determine what steps will be taken, by whom, and when.</p>
<p>d. Description of the process that will be used to monitor whether the professional development goals are being met and whether the planned professional development activities are being implemented in accordance with the benchmarks and timeline.</p>	<p><b>26-27</b></p>	<p>The monitoring process is described in sufficient detail so that who is responsible and what is expected is clear.</p>	<p>The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.</p>

<b>5. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 6 & 12 (Appendix F)	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a.</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.	<b>28</b>	The plan clearly summarizes the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support proposed to support the implementation of the District’s Curriculum and Professional Development Components. The plan also includes the list of items to be acquired, which may be included as an appendix.	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.

<p>b. Describe the existing hardware, Internet access, electronic learning resources, and technical support already in the District that could be used to support the Curriculum and Professional Development Components of the plan.</p>	<p><b>28-29</b></p>	<p>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 current level of technical support is clearly explained.</p>	<p>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.</p>
<p>c. List of clear benchmarks and a timeline for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components.</p>	<p><b>30-35</b></p>	<p>The benchmarks and timeline are specific and realistic. Teachers and administrators implementing the plan can easily discern what needs to be acquired or repurposed, by whom, and when.</p>	<p>The benchmarks and timeline are either absent or so vague that it would be difficult to determine what needs to be acquired or repurposed, by whom, and when.</p>
<p>d. Description of the process that will be used to monitor whether the goals and benchmarks are being reached within the specified time frame.</p>	<p><b>30-35</b></p>	<p>The monitoring process is described in sufficient detail so that who is responsible and what is expected is clear.</p>	<p>The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.</p>

6. <b>FUNDING AND BUDGET COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 7 & 13, (Appendix F)	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
a. List of established and potential funding sources and cost savings, present and future.	<b>37</b>	The plan clearly describes resources* that are available or could be obtained to implement the plan. The process for identifying future funding sources is described.	Resources to implement the plan are not identified or are so general as to be useless.
b. Estimate implementation costs for the term of the plan (three to five years).	<b>38</b>	Cost estimates are reasonable and address the total cost of ownership.	Cost estimates are unrealistic, lacking, or are not sufficiently detailed to determine if the total cost of ownership is addressed.
c. Description of the level of ongoing technical support the District will provide.	<b>28, 38</b>	The plan describes the level of technical support that will be provided for implementation given current resources and describes goals for additional technical support should new resources become available. The level of technical support is based on some logical unit of measure.	The description of the ongoing level of technical support is either vague or not included, is so inadequate that successful implementation of the plan is unlikely, or is so unrealistic as to raise questions of the viability of sustaining that level of support.
d. Description of the District's replacement policy for obsolete equipment.	<b>41</b>	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.
e. Description of the feedback loop used to monitor progress and update funding and budget decisions.	<b>43</b>	The monitoring process is described in sufficient detail so that who is responsible, and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.
* In this document, the term "resources" means funding, in-kind services, donations, or other items of value.			

7. MONITORING AND EVALUATION COMPONENT CRITERIA Corresponding EETT Requirement(s): 11 (Appendix F)	Page in District Plan	Example of Adequately Addressed	Example of Not Adequately Addressed
a. Description of how technology's impact on student learning and attainment of the District's curricular goals, as well as classroom and school management, will be evaluated.	44	The plan describes the process for evaluation utilizing 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.	44-46	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. Description of how the information obtained through the monitoring and evaluation will be used.	44	The plan describes a process to report the monitoring and evaluation results to persons responsible for implementing and modifying the plan, as well as to the 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.

<b>8. EFFECTIVE COLLABORATIVE STRATEGIES WITH ADULT LITERACY PROVIDERS TO MAXIMIZE THE USE OF TECHNOLOGY</b> <b>CRITERION</b> Corresponding EETT Requirement(s): 11 (Appendix F)	Page in District Plan	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
a. If the District has identified adult literacy providers, there is a description of how the program will be developed in collaboration with those providers.	<b>47</b>	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.	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.
<b>9. EFFECTIVE, RESEARCHED-BASED METHODS, STRATEGIES, AND CRITERIA</b> Corresponding EETT Requirement(s): 4 & 9 (Appendix F)	Page in District Plan	<b>Example of Adequately Addressed</b>	<b>Not Adequately Addressed</b>
a. Description of how education technology strategies and proven methods for student learning, teaching, and technology management are based on relevant research and effective practices.	<b>48-51</b>	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. Description of thorough and thoughtful examination of externally or locally developed education technology models and strategies.	<b>48-51</b>	The plan describes references to research literature that supports why or how the model improves student achievement.	No research is cited.
c. Description of development and utilization of innovative strategies for using technology to deliver 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).	<b>48</b>	The plan describes the process for development and utilization of strategies to use technology to deliver specialized or rigorous academic courses and curricula, including distance learning.	There is no plan to utilize technology to extend or supplement the District's curriculum offerings

# Appendix I: Education Technology Plan Benchmark Review

California Department of Education      **EETT-F02BR**      Enhancing Education Through Technology (EETT)  
Education Technology Plan Benchmark Review  
EETT-F02BR (rev. 09/04)

## Education Technology Plan Benchmark Review For the grant period ending June 30, 2006

### IDENTIFYING INFORMATION:

CDS # 21653006024137

**Applicant Name: Bolinas-Stinson Beach Union School District**

The *No Child Left Behind Act* requires each Enhancing Education Through Technology (EETT) grant recipient to measure the performance of their educational technology implementation plan. To adhere to these requirements, describe the progress towards the goals and benchmarks in your education technology plan as specified below. The information provided will enable the technology plan reviewer better to evaluate the revised technology plan and will serve as a basis should the district be selected for a random EETT review. Include this signed document with your revised education technology plan submitted to your regional California Technology Assistance Project (CTAP) office.

1. Describe your district's progress in meeting the goals and specific implementation plan for using technology to improve teaching and learning as described in Section 3.d., Curriculum Component Criteria, of the EETT technology plan criteria described in Appendix C. (1-3 paragraphs)

Within the space of four years the Bolinas-Stinson Beach Union School District has gone from no focus or commitment to technology use in the classroom to nearly completing all goals and benchmarks laid out in our 2002 Technology Plan. In these 4 years we have: Hired a Technology Coordinator who works 0.75 FTE; built a Technology Lab and populated it with enough computers to handle each of our grade levels; upgraded (where necessary) and networked all classroom computers; all certificated teachers now have a laptop; moved to electronic attendance; developed and rolled out electronic report cards and student database; updated all necessary software district-wide; developed a technology curriculum taught by the Technology Coordinator and based on benchmark outcomes specified in the Technology Plan; provided Professional Development for all Classified staff to ensure they have adequate skills; provide ongoing support for integration of technology tools in the classroom curriculum at all grade levels; purchased, provided training for and employed digital video cameras and video editing as classroom tools; etc. In other words, we have successfully implemented the 2002 Technology Plan, and in some areas exceeded it.

Goals for improved teaching and learning are set out in the 2002 Tech Plan in the Curriculum, Professional Development and Monitoring and Evaluation sections of the Plan. In particular, the Curriculum section identifies six major goals and articulates Benchmark standards for all students, K-8. All six of the Curriculum Goals have been met and the grade level Benchmark Standards have been largely met. In particular, we are still working toward full compliance with the following 8<sup>th</sup> grade Benchmark Standards: all formal written 8<sup>th</sup> grade work is to be word processed; graduating 8<sup>th</sup> graders will be prepared to pass the Tamalpais High School District technology exit examination (this is a new requirement we have added to the Benchmark Standards in the past year); by the end of 8<sup>th</sup> grade all students will be typing at a calculated error-free rate of 35 WPM. We are making consistent progress toward achieving these goals.

2. Describe your district's progress in meeting the goals and specific implementation plan for providing professional development opportunities based on the needs assessment and the Curriculum Component goals, benchmarks and timeline as described in Section 4.b., Professional Development Component Criteria, of the EETT technology plan criteria described in Appendix C. (1-3 paragraphs)

The Bolinas-Stinson Beach Union School District Technology Plan calls out three main Professional Development goals. While these goals have been largely achieved, we are approximately one year behind plan in achieving CTAP<sup>2</sup> proficiency levels as called out in the Plan. The District has provided professional development opportunities both as in-service and support for teachers wanting to extend their technological literacy through outside workshops. In addition, we have aggressively incorporated use of technology tools in curriculum mapping (including a multi-day workshop and ongoing training and support) and use of computers for administrative functions.

The applicant certifies that the information described above is accurate as of the date of this document. Should the applicant be selected for a random EETT review, the information stated above will be supported by adequate supporting documentation.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above certifications.

**For CDE Use Only**

**Date Added:** \_\_\_\_\_

**Selected For Random Review:** \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
PRINTED NAME OF AUTHORIZED REPRESENTATIVE

\_\_\_\_\_  
TITLE OF AUTHORIZED REPRESENTATIVE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE