

**Local Education Technology Plan,
July 1, 2008 through June 30, 2013**
Submitted to California Department of Education
Through CTAP Regional Office
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Freshwater School District Profile

Freshwater School District, located five miles outside of Eureka surrounded by farmland and forest, serves 300 students grades K-8 in two schools. Freshwater Elementary School (269 students) and Freshwater Charter Middle School (46 students) share the 10 acre site as well as administration and support personnel. The two schools function as a K-8 campus, with both schools being "schools of choice" for many families in the greater Eureka area.

Freshwater installed its first computer lab in 1986. Since then, the District has replaced and re-built the computer lab infrastructure four times. Currently, the lab houses 24 new Pentium processor computers tied to the District's T1 line. Each of the 14 classrooms also has at least two computers with high speed internet capability. The Internet server also provides the administration and office with access to the T1 line. More and more office and teaching functions are managed with the Internet and file sharing.

This Technology Plan is submitted by Freshwater School District under *No Child Left Behind* criteria. The District has qualified for e-rate funding under our current technology plan. In the past few years, the District has modernized 10 classrooms, the office, and the multi-purpose room, built three new classrooms and four new restrooms, and opened a new gymnasium in September, 2005. The DSA-approved plans for each of these projects included **total-school access to high speed internet**.

STAR test scores in Freshwater are very good. The elementary school's API is 859 with a rank of "10" in comparison to other similar schools. The middle school's API is 851 with a growth target of 856. It is ranked at "5" in statewide comparison. The District overall **API is 851**.

This is a five year technology plan beginning July 1, 2008 and ending June 30, 2013. The first phase of the plan was spent gathering data for review, bringing stakeholders to the table, developing, and writing the plan. The individual benchmarks begin in the spring of 2008, with the first benchmark for evaluation, for Year 2, occurring in June, 2009.

1. **PLAN DURATION** – July 1, 2008 until June 30, 2013
2. **STAKEHOLDERS CRITERION:**

Leadership team: Technology teacher/parent – Kari Holmberg; Technology maintenance/webmaster/parent – Mike Craghead; Superintendent/Principal – Thom McMahon; K/1 classroom teacher/community member – Carrie Holverson; Middle school math and science teacher – Michelle Dobrowolski; Kindergarten teacher – Jenny Sisk

Local stakeholders include: Freshwater Educational Foundation, Freshwater School Site Council, Board of Trustees, Website design and service - Neuroscape Computers, Humboldt County Office of Education technology and curriculum support, and After School Child Care program director – Jennah Sylvia.

Clearly, the approximately \$2100 of annual EETT funding will not go far toward reaching our goals. **Freshwater School District has and will continue to support:**

- 1) hardware/software/networking;
- 2) maintenance/service including the website server monthly fee;
- 3) professional development for certificated and classified staff; and
- 4) direct instruction to students in the computer lab provided by a specialist.

This support has come through District general funds, the Freshwater Educational Foundation, the Freshwater Community Club, gifts from community members and parents, use of SIP, Title V, Special Education (surround sound systems for all classrooms), Title I and II funds, and competitive grants such as Charter Middle School implementation grant in 2000 and Visual Arts grant (purchase of electric

kiln) in 2004. It is anticipated that all these types of resources and any others as appropriate will continue to provide funding for technology in Freshwater School District.

3. CURRICULUM COMPONENT CRITERIA

a. Current Access to Technology Tools

Computers

Stakeholder	Access during school	Access after school	Access at other times	Classes after school/Saturday
Students	K-8 – two to five computers in each class with Internet access	Child Care program has access to computer lab for homework support/research	Child Care program has access to lab at school holidays incl. summer. Summer school students have access.	Enrichment classes (a variety of offerings) taught in three sessions during year in computer lab
Teachers and instructional staff	K-8 – at least two computer in each class and teacher workroom connected to Internet	Teachers have access to classrooms and lab at any time	See “access after school”. Every teacher has key to computer lab, teacher workroom and office.	Classes provided for teachers by technology teacher and aide; topics are determined by teacher needs
Parent/ community	Can use computer lab during the day if not in use	Can use computer lab after school if not in use	Can use computer lab with prior arrangements	Classes not currently taught for community

Video/Digital Camera/recorder/player

Stakeholder	Access during school	Access after school	Access at other times	Classes after school/Saturday
Students	Access through curriculum; older students learn to make record events and special programs	Child Care uses video player and camera for special occasions	Child Care program has access during school holidays and all summer	During 2007-08, Digital Photography taught as enrichment class. Video class currently offered
Teachers and instructional staff	Video recorder and player in every room; digital camera must be checked out	Teachers have 24 hour, 365 day access to their classrooms, computer lab, workroom	See “after school”	Video classes currently offered
Parents/ community	Video equipment available for special events	Same as “during school”	Equipment available for “check-out” with proof of insurance	No video classes currently offered

b. Current Use - Hardware/Software to Support Teaching/Learning, 2007-08 School Year

- Visual Arts Focus, Lessons for teachers to use, written by Freshwater Teachers, housed on Intranet “File Share” section of our server.
- Improving Student Writing - Lessons for teachers to use, written by Freshwater teachers, housed on Intranet “File Share” section of our server.
- Software purchased *and used* to accompany District’s reading adoption in grades 1-3
- Video player and large TV in every classroom; District supports AV Contract with Humboldt County Office; teachers order in-depth study units from HCOE Library and accompanying videos from HCOE Media
- Students in grades 5-8 required to learn Power Point and make a Power Point presentation regarding research curricular subject
- Computer etiquette taught to grades 4-8; concept of plagiarism taught; teachers use Internet to check for violations; students taught how to re-state and analyze information.

c. Summary of Freshwater School District’s curricular goals and academic content standards in District and School Planning Documents

In November, after an in-depth analysis of test scores and student performance, the instructional staff identified areas of relative weakness that continues at Freshwater. The female students, especially in

grades 4-8 were significantly weaker than the male students in the area of mathematics on both the CST and NRT portions of the test. The boys in specific grade levels were weaker than the girls in English/language arts. Although this is a common education problem, Freshwater had not had an on-going discrepancy. Further although our overall scores are high, this Here is the troubling data from STAR with areas of concern in *bold italics*:

California Standards Testing – Subgroups			NRT - Subgroups		
Subject	Male	Female	Subject	Male	Female
English/Language Arts			Reading		76
80 Percent Proficient or Advanced	65	78	Percent scoring Above 50 th percentile		
Mathematics			Mathematics	84	76
Percent Proficient or Advanced	67	63	Percent scoring Above 50 th percentile		
Science					
Percent Proficient or Advanced	77	42			

When comparing these scores as well as analyzing performance of the 7th/8th grade students in Freshwater Charter Middle School, we realized that we must investigate the source of this “gender issue”.

Further, the STAR scores also showed too wide a discrepancy between students identified as “economically disadvantaged” and those not so identified. Since the percentage of students on free or reduced price lunch has increased from 12% in 1993 to 33% in 2007, this is of special concern to the instructional staff. Here is the STAR data with areas of concern in *bold italics*:

CST – Subgroups			NRT - Subgroups		
Subject	Economically Disadvantaged		Subject	Economically Disadvantaged	
	Yes	No		Yes	No
English/Language Arts			Reading		
Percent Proficient or Advanced	57	79	Percent above 50 th percentile	66	83
Mathematics			Mathematics	76	83
Percent Proficient or Advanced	62	67	Percent above 50 th percentile		
Science					
Percent Proficient or Advanced	36	78			

The **curricular goals** for this EETT Plan echo those for Freshwater’s **LEAP plan**:

Performance Goal 1: *All students will reach high standards, at a minimum, attaining proficiency or better in reading and mathematics, by 2013-2014.*

Our goals are higher than the current expectation outlined in the **Freshwater Middle School Charter**. The Charter (revised 2004) states: “The California State testing results will meet or exceed the achievement of the local traditional junior high schools.” However, the Charter outlines ways beyond state testing that all students in the Middle School will show proficiency in core subject areas, including performance goals.

The **curricular goal for this plan is:**

By 2013, Freshwater School District students, at least 85% of *all* students, and at least 85% of each disaggregated group targeted above (females in math and science; males in language arts;

economically disadvantaged students in math, science and language arts) will attain proficiency or better as measured by state and local standards.

The major **strategies we will use are:**

- Careful diagnosis of the causes of the “gap” between the disaggregated groups
- Thorough planning of curriculum design to address the causes of the “gaps”
- Rigorous instruction based on constructivist philosophy and practice, on active learning embedded in important context, and on projects relevant to the students’ interests and environment
- A well-planned monitoring loop that leads to necessary changes and improvements
- Student performance of knowledge and skills demonstrated through written, oral, and technological presentations.

The portions of the **Freshwater School District Vision and Goals** that relate to our goals and strategies are as follows:

From the Vision –

- * Develop, implement, and continue to update a student-centered, integrated curriculum which addresses the modalities, strengths, and social development of each student.
- * Provide a successful educational program for each student which considers her /his unique needs, abilities, and /or cultural background.

From the Goals –

- * All Freshwater students will master the basic academic skills taught elementary school.
- * All Freshwater students will be able to communicate well with others in a variety of ways, to define and solve problems, and to think critically about a subject, developing and analyzing ideas.

d. List of clear goals and a specific implementation plan for using technology to improve teaching and learning by supporting Freshwater’s curricular goals and academic content standards

Freshwater School District’s students and teachers have worked diligently to maintain **high STAR scores**. The District compares admirably with districts across the State with similar demographics (our elementary school is a 10!). However, the analysis of student achievement from Spring, 2006 requires the District to look again at curriculum and content standards in light of the discrepancy between achievement of girls/boys, and between economically disadvantaged students and their counterparts. To do this, we begin with the basic **principles which underlie curriculum work** in Freshwater School District. They are:

- P1. **Equity** – all students and teachers have access to technology tools at FSD
- P2. **Constructivist base** – learning takes place when each student is expected to be building an individual “construct” of how to make meaning of the world
- P3. **Honesty** – students are entitled to meaningful, important ways of learning curriculum that is intellectually honest
- P4. **Cultural competency** – software, teaching techniques, student projects must be respectful of all people at Freshwater.

The **Goals** which further define how we will address the **major goal** of this three year plan are:

- G1. Teachers and students will use the power of technology to develop higher level **thinking skills** - analysis, evaluation, synthesis, creation.¹
- G2. Teachers and students will use **technology to aide in assessment**, learning to read and compare data, and to ask questions that drive data collection and analysis.²
- G3. Teachers and students will **work together to solve problems**,³ such as design of the school garden, grass cycling, vermiculture systems⁴, and native plant arboretum. Teachers and students **will work together in a variety** of ways including use of shared computer files, email, and “works in progress” which call for dialog, editing, and refinement leading to the presentation of a final product.⁵

¹ Barnett, H. (2003). Investing in Technology: The Payoff in Student Learning, *ERIC Digest*, ED479843, 3-4.

² Use of graphic organizers, semantic feature analysis, study sheets, etc. for increasing reading comprehension and vocabulary development can be made into a matrix, or series of matrices and data-bases by teachers or by older students for themselves. California Department of Education. (2000). *Strategic Teaching and Learning*, Sacramento, 113-140.

³ Grant, A. C. (2003). *Technology and the Cultural Divide*, Louisiana State University and A and M College, 23.

⁴ For the past two years, Freshwater School District has been involved in the implementation of the EIC (using the Environment as an Integrating Context for learning) through SEER (State Education and Environment Roundtable) made possible by a grant funded by the California Integrated Waste Management Board.

⁵ Danielson, C. (1996). *Enhancing Professional Practice*, ASCD, Alexandria, Virginia, 26-27.

- G4. Teachers and students will use technology to **communicate and to present knowledge and information** to a wider audience.

These Goals were adapted from the **SCANS skills**⁶ which Freshwater School District has used for the past 15 years. Further, in line with SCANS, the problems students will address as they gain skills will be important, meaningful **real-world** examples and situations derived from their environment.

In 2001, the *School Technology and Readiness Report*⁷ cited by David Thornburg in *The New Basics: Education and the Future of Work in the Telematic Age*, lists similar sets of skills: **basic scientific, mathematical, and technological literacy; inventive thinking; effective communication; and interpersonal skills**. Thornburg believes that schools can respond to the challenges workers face in the “telematic age” by embracing two fundamental characteristics and applying these to all schoolwork:

1. Learning is contextual⁸, not isolated
2. School is a process, not a place⁹

When looking for ways to bridge the gaps in standardized test scores of various groups of Freshwater students, “it is evident that the technological solutions that most effectively work to close the . . . divide involve students [engaged] in real-life dialogue and the sharing of common experiences. . . .Indeed, this is the basis of constructivist thought and inquiry-based learning that needs to become commonplace in our . . . education programs, computer software design and our schools’ daily curriculum.”¹⁰ Our approach as a school is to find the ways to teach the standards our students are required to learn so that the students develop the breadth of thinking, communication skills, and ability to work together they deserve.

Specific Learning Goals and Activities 2008-2013

Early Primary (Grades K-1)

100 % of Students have:

- Developed fine motor skill through mouse practice – *KidsPix*
- Logged in, opened programs - including CDs, and quit on their own
- Basic computer functions; turn on, proper shut down
- Disk care and use
- Program identification and location (icon)
- Exposure to internet use as related to curriculum
- Begin word processing
- Send product to printer
- Demonstrate the ability to save files and maintain a personal disk

100% of Students will:

Continue with the above to develop their skills

⁶ The Secretary’s Commission on Achieving Necessary Skills. (1991). *What Work Requires of Schools: A SCANS Report for America 2000*. U.S. Department of Labor, Washington, D. C.

⁷ Thornburg, D. (2002). *The New Basics*, ASCD, Alexandria, Virginia, 59.

⁸ Through the EIC process, many aspects of learning at Freshwater School have been imbedded in the context of environmental learning.

⁹ Thornburg, D. op. cit., 92.

¹⁰ Grant, A. C., op. cit., 23.

Middle Primary (Grades 2-3)

100% of Students have:

- Used a word processing program to: use the shift and cap lock keys, edit text to delete mistakes, bold, underline, and align text, insert and alter clipart graphics, locate and use the period and comma, and type paragraphs – *Microsoft Word (Word Processing)*
- Done research using CD encyclopedias and the internet - *World Book*,
- Practiced math skills – *Math Blaster*
- Become familiar with keyboard; use on both hands properly positioned
- Master basic word processing skills
- Demonstrate the ability to save and recall files and maintain a personal disk
- Become familiar with Internet in support of curriculum
- Introduce E mail
- Demonstrate the ability to create a “book” including text and illustrations using age appropriate software

75% of Students will:

- Before printing word documents, students will spell and grammar check and preview their document, adjusting font size and style to appropriate readability
- Learn how to cut and paste
- Learn how to name and save their documents into their doc folder
- Learn how to format titles, paragraphs and a bibliography
- Continue with the above to develop their skills
- learn how to use a previously set Bookmark to access a site on the Internet
- learn how to use graphs
- begin using *Mavis Beacon* to develop typing skills

Upper Elementary (Grades 4-8)

100% of Students have:

- Typed reports of one page or more
- Accessed the internet, using search engines to do research – *Netscape & Internet Explorer*
- Used a digital camera
- Used a scanner with some assistance
- Be a proficient file manager
- Master commonly used word processing skills
- Be able to utilize the computer as a communications tool using e-mail and web pages
- Participate in the development of a presentation utilizing a variety of media
- Keyboard at 20 wpm using two hands properly positioned – *Mavis Beacon*
- Set up and maintain a personal web page
- Computer graphing skills

75% of Students will:

- Learn more about the 6 programs contained in *Microsoft Word*: word processing, spreadsheets, databases, drawing/painting and presentations
- Developed multimedia projects – *HyperStudio, PowerPoint*

- o Complete a project utilizing a publishing program, including the scanning of image
- o Continue with the above

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

Second and Third graders are introduced to computers in the first-trimester. During this 12-week period, students learn how to access and save to the server. They also learn the essentials of word processing, drawing, printing, and the Internet (including Internet safety).

The Computer Lab Aide is developing a cyber-safety curriculum that includes three components: cyber-safety, character and global literacy. Completion of the training program will be required before students use classroom computers. We also have a partnership with the California Highway Patrol that brings in an investigator to talk to students and parents about the need for cyber-safety.

Goal 3f: We will increase students' awareness of safe, secure, legal and ethical use of the Internet and other forms of electronic communication through a CyberEthics program of instruction for students.			
Implementation Plan			
Activities	Timeline	Person(s) Responsible	Monitoring & Evaluation
1. Establish a representative digital citizenship committee of Freshwater staff, parents and students.	Fall 2008	Computer Lab Aide	District curriculum, technology administrators and school site administrators track the development and implementation of all activities and accomplishments monthly and report progress at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
2. Research existing digital citizenship programs and related issues.	Fall, 2008	Computer Lab Aide	
3. Research partnership with existing digital citizenship organization(s).	Fall, 2008	Computer Lab Aide	
4. Refine and adopt a K-8 digital citizenship curriculum that is integrated with the Character Counts! Program and encourages positive social action.	2008-2009	Classroom teachers	
5. Develop specific board policies on cyber-bullying, threats, etc. beyond the Acceptable Use Policy (AUP).	2008	Superintendent, Board of Trustees	

6. Create a forum for parent education on digital citizenship.	Ongoing	Superintendent	
7. Internal databank of specific instances of cyber-abuse.	Fall, 2009	Superintendent	
<i>Evaluation instrument: teacher training materials, lesson plans, samples of student activities and products, board policies, promotional flyers, sign-in sheets.</i>			

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

In Grade 4-8, the teachers combine use of the software program, MISSING from Web Wise Kids with curriculum designed to teach research methods and data collection. In "Missing," students are challenged to outwit an Internet predator and avoid being his next victim. In role-playing format, they learn about dangerous forms of online behavior and what to do if a stranger approaches them online.

Freshwater School District has reached an agreement with Humboldt County Office of Education, to blocks sites with unsuitable content or language for children. The content filtering software is installed on all school computers. Routinely, IT staff members perform random checks of student computers to track what sites students have visited on campus.

Goal 3g: We will educate all students in Grades 2-6 on how to avoid dangerous, inappropriate, or unlawful online behavior. [AB 307 requirement]

Implementation Plan

Activities	Timeline	Person(s) Responsible	Monitoring & Evaluation
Establish a representative digital citizenship committee of Freshwater staff, parents and students.	Fall 2008	Computer Lab Aide	District curriculum, technology administrators and school site administrators track the development and implementation of all activities and accomplishments monthly and report progress at regular district/ site administration meetings. Modifications to our district activities will be made as needed in order to insure that we meet or exceed measurable objectives.
Research existing digital citizenship programs and related issues.	Fall, 2008	Computer Lab Aide	
Research partnership with existing digital citizenship organization and with the law enforcement community.	Fall, 2008	Computer Lab Aide	
Refine and adopt a K-8 digital citizenship curriculum that is integrated with the Character Counts! Program and encourages positive social action.	2008-2009	Computer Lab Aide, Superintendent, Board of Trustees	
Develop specific board policies on cyber-bullying, threats, etc. beyond the Acceptable Use Policy (AUP).	2008	Superintendent, Board of Trustees	
Create a forum for parent education on digital citizenship.	Ongoing	Computer Lab Aide, Superintendent	
Establish an Internal databank of specific instances of cyber-abuse.	Spring, 2008	Management Team	
Provide a safe internet experience through use of content filtering programs and monitoring software. Internet with content filtering programs and tracking.	Ongoing	Superintendent, HCOE IT Staff	

Evaluation instrument: teacher training materials, workshop evaluations, lesson plans, samples of student activities and products, board policies, promotional flyers, sign-in sheets.