Mountain Empire Unified School District
Technology Plan

July 1 2009-June 30, 2014

3291 Buckman Springs Rd.
Pine Valley, CA 91962
(619) 473-9022

Appendix J – Technology Plan Contact Information (Required)

Education Technology Plan Review System (ETPRS)
Contact Information

County & District Code: 37 - 68213

School Code (Direct-funded charters only): _ _ _ _ _ _ _

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MEUSD TECHNOLOGY PLAN
K-12TH GRADE
2009-2014

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Mountain Empire Unified School District

Demographics

Mountain Empire Unified School District is a small, rural district serving grades kindergarten through 12th, which serves a broad socioeconomic range of students from those residing in small communities to those on multi-acreage parcels.

The district is located in the southeastern corner of San Diego County. The district enrolls approximately 1,700 students at six elementary schools, a middle school, a high school, three continuation schools and independent study. The middle and high school share a common site and can therefore share technology resources. In addition, a Pre-School and Adult Education Program serve the communities.

Sixty percent of our students qualify for free or reduced price lunches. There is a clear commitment district-wide to increase student achievement utilizing technology curriculum integration to meet the diverse needs of all students. Each classroom has been wired for interconnectivity and has access to the Internet. The District leadership considers computer and information technology to be vitally important to the continued success of the Mountain Empire Unified School District students in the global 21st Century. It is recognized that implementing any such comprehensive plan is very complex and expensive. The educational priority of our schools is to improve and increase student learning using technology as a support mechanism and tool for developing communication and creativity.

This Technology Plan will allow for the following:

- Each classroom to have multiple computers to ensure ongoing access to technology-based instructional materials and activities.
- Access to on-going meaningful technology training and mentorship opportunities for students and staff.
- Resources to develop a fully integrated technology curriculum.
- Video-conferencing equipment and capability at the Senior High School.

1. PLAN DURATION

In light of the need to align teaching and learning with the needs of society, the economy, and the recommendations of the California Education Technology Task Force, the original strategic plan for technology was developed in 1999 by the District Technology Advisory Committee (DTAC) for Mountain Empire Unified School District. Subsequent revisions and updates reflect the status of technology integration in the district. The plan is consistently reviewed to ensure the goals correspond with *No Child Left Behind* (NCLB) computer literacy standards, *National Educational Technology Standards* for Students, Teachers, and Administrators, as well as district standards. The revised MEUSD Technology Plan will be in effect from July 1, 2009 to June 30, 2014. Benchmarks and timelines are based on the five-year length of the plan and are monitored and evaluated as stated in each objective.

2. STAKEHOLDERS

The following individuals, as members of the District Technology Advisory Committee, are key stakeholders involved in providing input and development of the technology plan:

Steve Van Zant	Superintendent
Queta Luquin	Business Manager
Jennifer Whitney	District Technology Coordinator
Susan Lafo	ROP / High School Teacher
Diane Young	Mountain Empire High School Principal
Brennan McLaughlin	Director of Technology Clover Flat/Jacumba Elementary Principal
Barbara Cowling	Co-Director of Alternative Education
Mona Noren	Co-Director of Alternative Education
Rose Ann Morris	Lead Teacher in Educational Technology
School Site Councils	“All Sites”

The responsibilities of the District Technology Advisory Committee are:

- Review hardware and software standards for performance, compare hardware and software to industry standards, and make recommendations for future hardware and software acquisitions.
- Review and revise district technology policies.
- Review and revise long-term technology use and implementation in the curriculum, and
- Review and recommend software upgrades based on current usage, hardware capacity and cost.

The District Technology Advisory Committee wrote the original District Technology Plan in 1999. This plan was revised and updated in 2003, 2006 and again in 2009. The District Technology Advisory Committee has continued to meet and has developed this update to the plan. This committee meets quarterly to carry out the responsibilities described above. Although parents are not represented directly on the District Technology Advisory Committee, due to the difficulty in identifying a parent able to make the meeting commitments, parent input is compiled through a review of the District Technology Plan by each School Site Council. This input is reviewed at district Administrative Leadership meetings and discussed by the District Technology Advisory Committee. Due to classified staff workday demands, classified staff is not directly represented on the District Technology Committee. Classified staff input is gathered through classified staff meetings with each site principal and reviewed at district Administrative Leadership meetings.

3. CURRICULUM COMPONENT

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

Existing Connectivity for District and School Sites
All school sites are connected via a T-1 connection going back to the District Office where they are connected via a DS3 10Mbps connection to the San Diego County Office of Education. A *Windows 2003* server is currently installed at the middle/senior high school, allowing students and staff to login from any workstation on campus and access their own files through remote access. Staff may also access their desktop and their own files from home. Maintenance, expansion of services and connectivity are provided from the District level.

Computer Labs at all School Sites, Library Centers, & Classroom Computers
Each of the ten school sites in grades K-12 have access to technology in the classroom via a minimum of one student/teacher computer in each of the classrooms, plus at least one computer lab within each school site. Each classroom has access to the Internet, although most classrooms currently only have one computer for teacher use only. Individual sites set up schedules for computer lab use on an equitable basis. The goal of each school is to update and maintain computer access for all students in school computer labs in grades K-12.

There are two labs located on the middle/senior high school campus, one with 34 computers and the other with 32 computers. Both labs are networked to the district LAN and have Internet access. Each elementary school has one lab, with an average of 10-15 networked, Internet-connected computers. The middle/high school has three computer lab classrooms used to teach students computer literacy and productivity skills following the *No Child Left Behind* (NCLB) computer literacy standards and the *International Society for Technology in Education (ISTE) National Educational Technology Standards.*

The school libraries have computer centers for student and teacher use and are open before school, during middle school lunch and after school. There are five networked, Internet-connected computers at the middle/senior high school library. The middle/senior high library and Potrero school utilize the *Reading Counts* program. Students pick a book from a list. After they have read their chosen book, they take an online quiz. It is an incentive program to encourage all students to read. The elementary school libraries have at least three networked, Internet-connected computers. All students (including GATE, English Language Learners, and other special needs students) have equal access to technology. Special technology equipment for special needs students is provided as specified in the student's Individualized Education Plan (IEP). Students who are enrolled in the After School Programs at five elementary schools, and the Middle and High Schools, have access to computers as part of their program and use them to support classroom learning.

Most of the classrooms in the District have a networked teaching station and a projection device. These teaching stations are used for classroom presentations and guided instruction. All teachers at Clover Flat Elementary School, and three teachers at the high school, have document cameras, with additional document cameras planned for other District classrooms.

Student Access to Additional Technology Tools

Students at the middle/senior high school have access to scanners. Digital cameras are used by both the Yearbook, Web Design and Computer Graphic Arts classes in the Regional Occupational Program department, a math classroom that has a class historian, and the Associated Student Body. The senior high currently has one large Polycom videoconferencing unit and four smaller ViaVideo desktop videoconferencing units. The middle school teachers have access to using the large Polycom videoconferencing unit (located in one of the high school computer labs) as needed for classroom projects and/or professional meetings.

Students at various sites in grades K-12 currently have access to *MS Office*, *Accelerated Reader*, *Accelerated Math*, *SuccessMaker, Read Naturally,* and Scholastic's *Reading Counts* software via the district's network. All students have access to *Mavis Beacon Teaches Typing,* or other typing programs, via the network.

Teacher Access to Technology Tools

Teachers in the district have been provided with a classroom computer that has Internet access and email capabilities. As of September 2002, all district employees have been provided with an MEUSD email account, to improve collaboration within the district as well as to improve communications between district staff and parents. Examples include the daily bulletin, on-line attendance, student grades and assessment data.

Teachers have access to a variety of grade-appropriate instructional and classroom management software tools, including *MS Office*, Open Office, and Free-Ware such as Google Earth, *Making the Grade* grade book software, the San Diego County Department of Education (SDCOE) *Student Information System* (*SIS*) database for online attendance and student data, CTAP Region 9 resources provided through the SDCOE, and CTAP online resources for technology professional development and curriculum support.

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

In the past, technology has been used primarily in lab-based environments. Technology integration was not fully implemented throughout the curriculum. Lack of access to classroom technology has prevented adequate implementation of technology curriculum integration. It has also limited professional development training and personal computer skills development. Additionally, lack of funding to fully provide effective technology management and technical support has been an issue.

Recently, the District has made progress in acquiring classroom technology. The current District focus is to develop effective strategies for integrating technology throughout the curriculum in order to better support teaching and learning in the classroom. To completely realize educational technology integration, the implementation of the Wide Area Network (WAN) infrastructure and telecommunication (i.e. Internet) capability has been upgraded and/or added to all classrooms at all sites. Budget issues continue to restrict progress in technology. However, the employment of the Technology Coordinator has provided leadership in this area and the use of technology in the computer labs and classrooms has increased.

Existing Hardware and Software Integration

At the elementary level, teachers have a single classroom computer, used primarily for email, data management and academic classroom programs. All elementary schools have computer labs that average about 30 computers per site. Students rotate into the labs two or more hours a week to learn keyboarding skills, to word process class assignments, and to do computer assisted learning activities, including research, and academic assessment.

At the middle school level, students use classroom lab computers to learn the Six Basic Computer Skills **(**E-Mail, Word processing, Spreadsheet, Courseware, Internet and Electronic Publishing). Students apply these skills in completing assignments for core academic classes and electives. Computers are widely used all year for Internet research and electronic presentations, as well as to access the networked instructional software for reading and math.

In the senior high, the ninth grade Geography Tech Class is dedicated to teaching students the computer basics and technology skills that will be needed in other classes. Almost every high school core class requires at least one project using PowerPoint and research projects that require the use of the Internet. The 9th grade teachers have developed cross-curricular projects; for example, Geography students completed "countries" projects in which they learned Internet research skills and *PowerPoint* techniques in the Technology Foundations course, in addition to screening for proper use of grammar, spelling, and composition skills in their English classes.

The use of videoconferencing has been implemented in select classrooms at the high school, which currently has one large Polycom unit and four smaller desktop ViaVideo

units. The high school art class participates in a 3D virtual world art exhibit through the use of videoconferencing. The Biology classes participate in quarterly conference meetings with the curators of the Anza-Borrego State Park Museum in Anza-Borrego State Park.

Currently, all teacher computers on each campus are licensed with *Windows 2000,* or *XP, Microsoft Office 2003 or 2007,* and *Making the Grade*. Newly acquired computers will be licensed with *Windows XP, Microsoft Office 2007 and Making the Grade.* This basic productivity software will fill the needs for applications in the Six Basic Computer Skills, which are integrated into the core curriculum areas. Teachers and students utilize all software and hardware on a daily basis throughout the traditional school year and during the summer sessions.

Software used in our schools has been purchased to allow students to use software aligned with our standards-based curriculum. An array of instructional software is installed on the district network for use in grades K-12 in addition to *MS Office*. These programs include *Accelerated Reader* and Scholastic's *Reading Counts*. Elementary school students also use *Accelerated Math*, *Math Facts in Flash*, *Accelerated Writing*, and STAR math assessment software. Middle school students use *Accelerated Reader, Accelerated Math* and Scholastic's *Reading Counts.* Middle and high school students have access to *Mavis Beacon* keyboarding software. In addition, teachers have access to Measuring Academic Progress (MAP) and Success Maker assessment software, which are aligned with the California State Standards.

Accelerated Math has been implemented at a few of the elementary sites and at the alternative education high schools. *Reading Counts* is widely used throughout the district to improve literacy skills. Technology funding will continue to be used to acquire courseware in reading, language, and mathematics for all sites. K-12th grade courseware will be researched and selected by each appropriate department, with the approval of the principal, teachers, Director of Technology, and Technology Coordinator.

3c. Summary of district's curricular goals and academic content standards in various district and site comprehensive planning documents:

It is the goal of this plan to create a framework that uses educational technology funds to improve academic achievement through increasing the technology literacy levels of all our students, as well as to improve the capacity of our instructional and support staff to effectively integrate technology with curriculum and instruction. To achieve these goals, the plan is responsive to and aligned with the technology standards set by *No Child Left Behind* and *National Educational Technology Standards (NETs) Project* using advanced technology to improve student academic success.

Current curriculum goals:

- Improve STAR and CAHSEE scores particularly in weaker areas such as language mechanics, spelling and math problem-solving.
- More fully integrate technology into the classroom curriculum.
- Meet the curricular needs of students especially in math, language arts, science, and social science.
- Improve learning and performance of students who perform below grade level and/or are English Language Learners or have special needs, and
- Provide research-based intervention program for students below grade level proficiencies.

Mountain Empire Unified School District has adopted the California state content standards as the basis for all curricula at both the elementary and secondary level. The district curricular goal for all content areas is the demonstration of academic proficiency for all district students in each curricular area. State academic assessments are the instruments through which district students demonstrate this proficiency. Specifically, proficiency level performance on the state *Content Standards Tests* (CSTs) and proficiency level performance on the *California High School Exit Exam* are measures of this proficiency. Governing board approved school site documents reflect these goals and the means to measure the attainment of these goals.

These documents include:

- Single Plan for Student Achievement for each site.
- School Accountability Report card for each site.
- Mountain Empire Unified Technology Plan.
- California State Content Standards and Frameworks.
- Single School Site Plans for all schools in the District.
- District Acceptable Use Policies for staff and students.
- Western Association of Schools and Colleges (WASC) accreditation self-study.
- Coordinate Compliance Review (CCR) for each elementary site.
- No Child Left Behind Act, and the
- National Educational Technology Standards (NETS).

The Academic Performance Index (API) and Adequate Yearly Progress (AYP) are the assessment measures used to document progress toward these goals.

3d. Goals for using technology to improve teaching and learning

The District's goal is to improve K-12 literacy skills for all students by using technology to support reading, writing, and research with computer applications and tools for accessing, organizing, and presenting text and information. Technology will be used to provide interactive instructional activities, immediate feedback, diagnosis, assessment and remediation. Expanded access to computers and peripherals will enhance

opportunities for project-based learning in grades K-12, as well as providing a catalyst to foster creativity.
In the K-12 mathematics curriculum, technology will be used to improve student thinking and reasoning skills. Grade-appropriate computer applications, such as Winplot and publisher-provided technology products, will help provide concrete visual images and representations for mathematics concepts, as well as provide tools for data organization and analysis.

The following is a summary of the anticipated positive outcomes for incorporating technology into teaching and learning in MEUSD:

- All students will be able to use a wide variety of technological tools to empower their future success as students and workers.
- All students will have equal access to information via current and emergent technology as a basis for lifelong learning.
- Lifelong learners will be fluent in processing and managing information through the skillful use of technology.
- Students and educators will be skillful in the use of technology, which supports the development of process skills such as flexibility, adaptability, critical thinking, problem solving and collaboration.
- Students, educators and community will have access to networking technology systems, which permit efficient and effective communication within and outside the district.
- Technology will be used to better prepare all students for the workplace of today and the future.
- Our schools will use technology to maximize productivity and efficiency in district programs and management.
- Students will develop 21st Century skills as described below (see: http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=254&Itemid=120).

Core Subjects and 21st Century Themes
Mastery of core subjects and 21st century themes is essential for students in the 21st century. Core subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics.
We believe schools must move beyond a focus on basic competency in core subjects to promoting understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into core subjects:

- **Global Awareness**
- **Financial, Economic, Business and Entrepreneurial Literacy**
- **Civic Literacy**
- **Health Literacy**

Learning and Innovation Skills
Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in the 21st century and those who are not. They include:

- **Creativity and Innovation**
- **Critical Thinking and Problem Solving**
- **Communication and Collaboration**

Information, Media and Technology Skills
People in the 21st century live in a technology and media-driven environment, marked by access to an abundance of information, rapid changes in technology tools and the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to exhibit a range of functional and critical thinking skills, such as:

- **Information Literacy**
- **Media Literacy**
- **ICT (Information, Communications and Technology) Literacy**

Life and Career Skills
Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive Information age requires students to pay rigorous attention to developing adequate life and career skills, such as:

- **Flexibility and Adaptability**
- **Initiative and Self-Direction**
- **Social and Cross-Cultural Skills**
- **Productivity and Accountability**
- **Leadership and Responsibility**

Goal 3d.1: Improve Academic Achievement K-12

Objective 3d.1.1 By June 30, 2014, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of ten percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Benchmarks:

Year 1: By June 2010, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of two percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Year 2: By June 2011, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of four percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Year 3: By June 2012, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of six percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Year 4: By June 2013, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of eight percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Year 5: By June 2014, students will use technology to help improve their academic achievement in reading, language arts and mathematics, as measured by an average increase of ten percent scoring proficient or above in CST Reading, Language and Math scores, as compared to the 2009 baseline scores.

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: Each classroom teacher will use courseware software to augment classroom instruction, provide additional curricular reinforcement, and provide remediation opportunities for students. Some activities that will be woven into classroom instruction and student learning activities will include but not be limited to:

Grades K-2	Use guided learning software applications for phonetic skills, reading development to support English and non-English speaking students.
Grades 2-3	Use guided learning and assessment software specific to Math, Reading, Language Arts and ELL standards, with minimal Social Studies and Science, to support English and non-English speaking students.
Grades 4-5	Use guided learning and assessment software specific to Math, Reading, and Language Arts, Social Studies and Science. Introduction to basic keyboarding and word processing.
Grades 6-8	Use guided learning for Math, Reading, Language Arts, Social Studies and Science, as well as keyboarding, word processing and basic Internet research strategies.
Grades 9-12	Use word processing and advanced presentation software, including PowerPoint and graphics programs; ninth-grade requirement in guided learning for Internet research and career software applications; self-guided word processing and Internet research for essay compilation for all courses; PowerPoint presentations for all courses.

The teacher will maintain a utilization log of student use of support software on an ongoing basis. At least three times a year, the site administrator will survey the teacher utilization logs and report the results to the District Technology Advisory Committee (DTAC) for review. Should there be a need for further intervention to ensure progress towards meeting the goal, recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of the overall district progress toward the achievement of this goal will occur at least three times a year and will be presented by the Director of Educational Technology to the Superintendent and the DTAC.

Goal 3d.2: Improve Academic Proficiency of High School Students
Objective 3d.2.1 By June 2014, at least 95% of MEHS sophomores will have passed the California High School Exit Exam.

Benchmarks:

Year 1: By June 2010, at least 90% of MEHS seniors will have passed the California High School Exit Exam.

Year 2: By June 2011, at least 92% of MEHS seniors will have passed the California High School Exit Exam.

Year 3: By June 2012, at least 95% of MEHS seniors will have passed the California High School Exit Exam.

Year 4: By June 2013, at least 95% of MEHS seniors will have passed the California High School Exit Exam.

Year 5: By June 2014, at least 95% of MEHS seniors will have passed the California High School Exit Exam.

Person Responsible: Senior High administrators and the CAHSEE Coordinator

Implementation, Monitoring and Evaluation: The Senior High administrators and the CAHSEE coordinator will analyze the CAHSEE test results and report the findings to the staff. If benchmarks are not met, the Administrators and Technology Coordinator will collaborate with the English and/or Math departments to ensure proper training and effective use of the CAHSEE courseware. Additional strategies, such as small group instruction and/or peer tutoring, will be provided to supplement the courseware for students. The site administrator will report the results to the District Technology Advisory Committee (DTAC) for review. Should there be a need for further intervention to ensure progress towards meeting the goal, recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of progress toward the achievement of this goal will occur at least three times a year and be presented by the High School administrator to the Superintendent and the DTAC.

Goal 3d.3: Integrate technology into day-to-day teaching and learning of the content standards

The district and site master plans call for addressing needs in reading-language, mathematics, science, and history (as well as the arts) during the five-year duration of this plan. Typically, the local plans will target a specific subject area for a period from one through three years and typically subject areas are aligned with the text adoption cycle. This allows the staff to focus efforts across all of the grades (K-12), including staff development and improved student learning. The overall vision is for the teaching staff to take a more active role in the process of integrating technology into the curriculum in order to provide compelling ways for all students to meet State Academic Standards.

Objective 3d.3.1: By June 2014, there will be a 50% increase of students using grade appropriate presentation software to apply their knowledge to new problems

Objective 3d.3.2: By June 2014, there will be a 50% increase of students using grade appropriate online data and information resources for literacy and content area research

Objective 3d.3.3: By June 2014, there will be a 50% increase of students using grade appropriate scanners & digital/video cameras to enhance their presentation skills

Benchmarks:

Year 1-5:

- By June of each year there will be a 10% increase over the previous year of students using grade appropriate presentation software to apply their knowledge
- By June of each year there will be a 10% increase over the previous year of students grade appropriate online data and information resources for literacy and content area research
- By June of each year there will be a 10% increase over the previous year of students using grade appropriate multi-media scanners, digital and video cameras to enhance their presentation skills

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: The Technology Plan for improving teaching and learning addresses a new content area each year in alignment with the District Master Plan's curriculum adoption and/or revision cycle. This alignment allows for a more integrated and focused approach to infusing technology in the classroom. Using approved textbook teaching guides academic grade level teams will identify software and internet resources to be used, identify and develop appropriate grade level activities to ensure accomplishment of curriculum objectives, facilitate students' successful completion of activities and mastery of objectives, conduct reflections to identify and disseminate best practices and areas for next best steps.

Focus Areas:

- 2009-2010 Math and Science
- 2010-2011 English Learners and Visual and Performing Arts
- 2011-2012 History-Social Science
- 2012-2013 Science
- 2013-2014 Math

Assessment of progress toward each curriculum goal will be done each semester and monitored by school site principals. Grade level and department meetings will be held once each month to review and discuss progress toward student curricular goals.

The District Technology Advisory Committee, comprised of representatives from each school site, will meet once each quarter to monitor and evaluate progress toward implementation of the District's Technology Plan. A yearly review of student technology curriculum benchmarks and goals will be made to assure that the District Technology Plan continues to provide students with skills they need for the 21st Century. A report to

the Mountain Empire Unified School District Board of Trustees by the District Technology Committee will be done biannually.

3e. Goals outlining how and when students will acquire technology and information literacy skills

Technology skills are integrated throughout a student's K-12 learning experience. The following goals are relative to the use of technology by students and staff. These goals serve as a framework to help students and teachers utilize computers and other appropriate technological applications as tools to accomplish specific purposes throughout K-12 learning. Beginning technology skills are introduced, reinforced and mastered by students in the early grade spans with more advanced technology skills mastered at the upper grade spans.

Student achievement in technology will be evaluated through 1) teacher observation, 2) performance on technology integrated assignments and 3) completion of academic projects. The following is a summary of the anticipated positive outcomes for acquiring technology and information literacy skills:

- Students will understand the basic operations of technology systems.
- Students will use technology as research tools to gain information literacy.
- Students will use technology as creativity and productivity tools.
- Students will use technology as global communication tools.
- Students will use the ethical and societal issues related to technology.
- Students will use technology to learn how to be life-long learners.

The District-adopted technology that is used to support student learning is driven by the *National Educational Technology Standards* (NETS). NETS is divided into six broad categories:

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

A major component of the NETS Project was the development of a general set of profiles describing technology (ICT) literate students at key developmental points in their precollege education. The profiles, published in 2007 by the *International Society for Technology in Education,* highlight a few important types of learning activities in which students might engage as the new NETS Standards are implemented. These examples are provided in an effort to bring the standards to life and demonstrate the variety of activities possible. The profiles are divided into four grade ranges: Grades PK–2, Grades 3–5, Grades 6–8, and Grades 9–12.

Goal 3e.1: Acquire Technology Skills

Objective 3e.1.1 By June of 2014, 95% of students in grades 3-12 will incorporate the following grade level appropriate technology proficiencies to successfully complete classroom assignments:

- Use technology tools for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.
- Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests.
- Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
- Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.

Benchmarks:

Year 1: By June 2010, 55% of the students in grades 3-12 will incorporate the above technology proficiencies to successfully complete classroom assignments in language arts and math.

Year 2: By June 2011, 65% of the students in grades 3-12 will incorporate the above technology proficiencies to successfully complete classroom assignments.

Year 3: By June 2012, 75% of the students in grades 3-12 will incorporate the above technology proficiencies to successfully complete classroom assignments.

Year 4: By June 2013, 85% of the students in grades 3-12 will incorporate the above technology proficiencies to successfully complete classroom assignments.

Year 5: By June 2014, 95% of the students in grades 3-12 will incorporate the above technology proficiencies to successfully complete classroom assignments.

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: NETS categories and profiles provide a framework of performance indicators for assessing student progress. In the District, standards within each category and grade level are introduced, reinforced and mastered by students. Teachers are able to use these standards and profiles as guidelines for

planning technology-based activities in which students achieve success in learning, communication, and life skills. (See: http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/NETS_for_Students.htm).

Some activities that will be woven into classroom instruction and student learning activities will include, but not be limited to:

Grades K-2	Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (Standards 1, 2) Find and evaluate information related to a current or historical person or event using digital resources. (3)
Grades 3-5	Produce a media-rich digital story about a significant local event based on first-person interviews. (1,2,3,4) Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3,4)
Grades 6-8	Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1,2) Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3)
Grades 9-12	Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1,4) Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions. (1,2,3,4)

Student technology proficiency will be measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects. Each classroom teacher will maintain a collection of student work that demonstrates students using the NETS standards to successfully complete assignments. The teacher will keep a copy of the integrated instructional lesson and examples of successfully completed work. At least two times a year, the site administrator will survey the collections of student work and teacher lesson plans and report the results to the District Technology Advisory Committee (DTAC) for review. Should there be a need for further intervention to ensure progress towards meeting the goal, recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of the overall district progress toward the achievement of this goal will occur at least two times a year and be presented by the Director of Educational Technology to the Superintendent and the DTAC.

Goal 3e.2 Develop Information Literacy Skills

Objective 3e.2.1 By June 2014, at least 95% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

Benchmarks:

Year 1: By June 2010, at least 55% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

Year 2: By June 2011, at least 65% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

Year 3: By June 2012, at least 75% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

Year 4: By June 2013, at least 85% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

Year 5: By June 2014, at least 95% of students in grades 3 through 12 will demonstrate the effective use of information literacy skills*, as measured by teacher observation, a technology skills checklist, performance on technology integrated assignments, and completion of academic classroom projects.

* Information Literacy Skills are defined as “the ability to access, evaluate, and use information from a variety of sources”. Specific sample skills would include: locating information using subscription services, print resources, reference materials, and the Internet; distinguishing between fact, fiction and opinion when conducting research; evaluating the appropriateness of sources, then validating and synthesizing information acquired from these sources; analyzing and organizing data and

information, then using it to make oral, written and/or visual presentations; and using computer resources safely, responsibly, and ethically.

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: Student information literacy knowledge and skills will be measured by teacher observation, a skills checklist, performance on technology integrated assignments, and completion of academic classroom projects. Each classroom teacher will maintain a collection of student work that demonstrates students using the NETS information literacy standards to successfully complete assignments. The teacher will keep a copy of the integrated instructional lesson and examples of successfully completed work. At least two times a year, the site administrator will survey the collections of student work and teacher lesson plans and report the results to the District Technology Advisory Committee (DTAC) for review. Should there be a need for further intervention to ensure progress towards meeting the goal recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of the overall district progress toward the achievement of this goal will occur at least two times a year and be presented by the Director of Educational Technology to the Superintendent and the DTAC.

3f. Goal for Ethical Use, Copyright, and Fair Use of Technology:

Students and teachers in the Mountain Empire Unified School District will learn about the concept, purpose, and significance of the ethical use of information technology including copyright, fair use, plagiarism and the implications of illegal file sharing and/or downloading. As a result of classroom instruction, students will demonstrate the ethical & fair use of technology as well as a thorough understanding of copyright law related to technology.

Benchmarks/Implementation Plan:

- Identify key issues in the appropriate use of technology (year one), including:
  - Lawful and unlawful uses of copyrighted works
  - Concept and purpose of copyright
  - Lawful and unlawful downloading & peer-to-peer file sharing
  - Avoiding plagiarism
- Review online resource, “Are You Cybersafe?” – developed by CTAP Region 4 at: http://www.ctap4.org/cybersafety/
- Schedule needed professional development (ongoing)
- Assist teachers in adapting available lessons and applying training in the classroom (ongoing)
- Meet with parents, inform them of legalities, and ask them to monitor their students at home

- Conduct quarterly reflections to monitor implementation to identify and disseminate best practices and areas for next best steps
- Develop policy to address discipline for un-ethical use of technology

Person Responsible: Site Administrators

Monitoring and Evaluation: Teachers and site administrators will gather data using teacher surveys and classroom observations, analyze progress and make necessary changes. Should there be a need for further intervention to ensure progress towards meeting the goal recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of the overall district progress toward the achievement of this goal will occur at least two times a year and be presented by the Director of Educational Technology to the Superintendent and the DTAC.

3g. Goal for Internet Safety:

Students and teachers in the Mountain Empire Unified School District will be educated on Internet safety protocols. As a result of classroom instruction, students will demonstrate appropriate use of Internet resources to protect online privacy and avoid online predators. The district utilizes the St. Bernard iPrism web filtering software to oversee web page access and prohibit accessibility to inappropriate materials such as online chat rooms, adult material, and other inappropriate websites.

Benchmarks/Implementation Plan:

- Review online resource, “Are You Cybersafe?” – developed by CTAP Region 4 at: http://www.ctap4.org/cybersafety/
- Schedule needed professional development (ongoing)
- Assist teachers in adapting available lessons and applying training in the classroom (ongoing)
- Meet with parents, inform them of legalities, and ask them to monitor their students at home
- Conduct quarterly reflections to monitor implementation to identify and disseminate best practices and areas for next best steps
- Develop policy to address discipline for inappropriate and harmful use of technology

Person Responsible: Site Administrators

Monitoring and Evaluation: Teachers and site administrators will gather data using teacher surveys and classroom observations, analyze progress, and make necessary changes. Should there be a need for further intervention to ensure progress towards meeting the goal recommendations will be made by the site administrator working with grade level staff. The recommendations will be reported to the DTAC and modifications

will be made as needed. Monitoring of the overall district progress toward the achievement of this goal will occur at least two times a year and be presented by the Director of Educational Technology to the Superintendent and the DTAC.

3h. Goal for programs and methods of utilizing technology that ensures appropriate access to all students:

In a survey completed in for the middle/high school in May 2004, only 47% of our families have a computer at home with Internet access. This low percentage of families with Internet access has made us realize how important our job is to insure that all students gain computer literacy and productivity skills while at school. This survey has not been re-administered, since the communities' Internet access has not greatly advanced since 2004.

Mountain Empire Unified School District insures equal and appropriate access to technology to all students. If a student requires additional assistive technologies, they will be provided. The San Diego County Office of Education provides additional special education services and related assistance to meet the needs of students as outlined in their Individual Educational Program (IEP). For example, one student has received a special keyboard with oversized keys. Students with disgraphia have been given Alpha Smarts.

Whenever possible, students with special needs are mainstreamed and are provided equal access to all technologies. Students placed in a Special Day class will have equal access to technology. Any staff member working with students identified as having special needs are provided access to all district technology resources on a level with other staff.

English learners have full access to all technology. To support our English Language Learners, English Language Content Standards are being used by teachers to guide their instruction in order for these students to achieve grade level standards mastery. Teachers and administrators were involved in a training related to the English Learners. This training included English Language Development (ELD) and Specially Designed Academic Instruction (SDAIE) strategies. The result is that all teachers involved in the training became AB1969 compliant. Both ELD and SDAIE strategies include specific techniques that are simplified by access to technological integration.

MEUSD identifies Gifted and Talented Education (GATE) students. Teachers have been trained in the process of *Differentiated Instruction.* In additions, middle and high school teachers had a two-year training in the Silver, Strong and Associates*.* Differentiation for the advanced learners involves the adjustment of curriculum and instruction. Technology plays a key role in this method by providing the ability to add depth, novelty, complexity, and adjust pacing.

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: Throughout the school day all students will have equal and appropriate access to technology in order to receive instruction and/or complete classroom assignments. Teachers will insure technology access is available to all students when technology is to be used. The site administrator shall include in his/her quarterly reports to the DTAC verification that equal access is being made available equitably.

3i. Goal to utilize technology to make student record keeping and assessment more efficient:

For the past fourteen years MEUSD has used the San Diego County School District's *Student Information System* (SIS) to gather demographic and other information about each student. In addition, the middle and high schools use SIS to maintain daily attendance. The administrative staff at the middle and high schools uses SIS for all student scheduling and maintaining student discipline records for a variety of state and federal requirements. Classroom teachers have access to SIS data to assist them in meeting individual student academic needs.

All middle and high school teachers use *Making the Grade* as their grading program. This network-based program allows a teacher to enter grades from any computer on the campus.

Food service at the middle and high school: When students go through the lunch line, the cost of their lunch is automatically deducted from the amount of money that they have on file using a computer, *Meal Tracker* software and a number pad. Campo Elementary School uses *Accuscan* software and students swipe a card to keep track of the monies. These programs insure confidentiality for students enrolled in a free/reduced lunch program.

Special Education: All of our special education staff uses *E Z IEP.* The staff uses the software to complete and monitor student Individual Education Plans (IEP). This allows them to have easy access to all assessment data, recommendations and interventions available and they can make immediate updates as a student's needs change.

Accounting of Associated Student Body (ASB) funds: The high school financial secretary uses *Blue Bear* accounting software to manage ASB funds, including check writing, and accounts payable and receivable. ASB students and club advisors are able to view up-to-date account balances for all ASB activities and clubs.

Goal 3i.1 Use Technology To Make Student Record Keeping and Assessment More Efficient and Supportive of Student Achievement

Objective 3i.1.1 By June 2014, 100% of MEUSD teaching staff will use San Diego County Office of Educations' SIS to access, analyze and disaggregate student assessment data for each student in core content area classes to use the data to set learning goals in all core content classes.

Benchmarks:

Year 1: By June 2010, 80% of MEUSD teaching staff will use SIS to disaggregate student assessment data for each student in class to use the data to set learning goals in all core content classes.

Year 2: By June 2011, 85% of MEUSD teaching staff will use SIS to disaggregate student assessment data for each student in class to use the data to set learning goals in all core content classes.

Year 3: By June 2012, 90% of MEUSD teaching staff will use SIS to disaggregate student assessment data for each student in class to use the data to set learning goals in all core content classes.

Year 4: By June 2013, 95% of MEUSD teaching staff will use SIS to disaggregate student assessment data for each student in class to use the data to set learning goals in all core content classes.

Year 5: By June 2014, 100% of MEUSD teaching staff will use SIS to disaggregate student assessment data for each student in class to use the data to set learning goals in all core content classes.

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: At least twice a year, site administrators will meet with their teaching staff to analyze student assessment data that has been disaggregated. This data will be used to set learning goals in core content areas. Site administrators will make a yearly written report to the DTAC and Superintendent summarizing the meetings held. Should there be a need for further intervention to ensure progress towards meeting the goal, recommendations will be made by the site administrator, in consultation with grade level staff. The recommendations will be reported to the DTAC and modifications will be made as needed. Monitoring of the overall district progress toward the achievement of these goals will occur quarterly and will be presented by the Director of Educational Technology to the Superintendent and the DTAC.

3j. Goal to utilize technology to make teachers and administrators more accessible to parents:

Web Services: The District maintains its own web server and its own District web site (http://www.meusd.net). Several teachers and district staff members have been trained and are maintaining classroom web pages that are available on the Internet. Each school maintains its own webpage. For example, parents and community are able to locate information regarding calendars, up coming events, menus, school bulletins, newsletters and examples of student work on these school and district web pages. Parents and community are informed of the Internet links through email, written notes and parent's meetings such as Back-to-School Night and PTA.

The District ensures protection of its network by maintaining a firewall that includes Internet filtering. Appropriate student and staff use of the Internet is monitored via *iPrism* web tracking software. The District uses http://www.gaggle.net to provide email services including filtering and spam blocking.

All teachers, support staff, and administrators have District email addresses they use to communicate with parents when possible. At the beginning of each school year the addresses are shared with parents. Parents are asked by teachers and support staff for their home or workplace email addresses. This exchange of technology information is used to maintain high levels of communication with parents and the community regarding a variety of information ranging from student progress to current school events.

For parents who do not receive email, or who do not have access to email, the same information is communicated by either phone or written documents. All communications from school to home adhere to the District's policy regarding confidentiality of student information. The district is beginning to make Spanish translations of important school and district documents. The district has implemented a new automated phone system that will inform parents or guardians of important district information. Each school site has access to this phone system to inform parents or guardians of local school events and/or information.

Goal 3j.1 Improve Two-way Communication between School and Home

Objective 3j.1.1: By June, 2014, 100% of all identified families within the district will be included in the District's directory for broadcasting bulletin information using either email or the automated phone system.

Benchmarks:

Year 1: By June, 2010 80% of all identified families within the district will be included in the District's directory for broadcasting

bulletin information using either email or the automated phone system.

Year 2: **By June, 2011 85% of all identified families within the district will be included in the District's directory for broadcasting bulletin information using either email or the automated phone system.**

Year 3: **By June, 2012 90% of all identified families within the district will be included in the District's directory for broadcasting bulletin information using either email or the automated phone system.**

Year 4: **By June, 2013 95% of all identified families within the district will be included in the District's directory for broadcasting bulletin information using either email or the automated phone system.**

Year 5: **By June, 2014 100% of all identified families within the district will be included in the District's directory for broadcasting bulletin information using either email or the automated phone system.**

Person Responsible: Site Administrators

Implementation, Monitoring and Evaluation: Registration packets sent out to all parents will be used to collect home email addresses. The email addresses will be entered into the student data management system and used as a baseline collection of email addresses. An email contact list of families will be created for classes and the District office. Email contact lists will be compared to District goals for creating a District wide email communication system. Site administrators will report annually to the District Superintendent and Governing Board.

Objective 3j.1.2 **By June 2014, 100% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.**

Benchmarks:

Year 1: By June 2010, 80% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.

Year 2: By June 2011, 85% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.

Year 3: By June 2012, 90% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.

Year 4: By June 2013, 95% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.

Year 5: By June 2014, 100% of MEUSD teachers and administrators will be proficient users of e-mail in order to be more accessible to parents.

Person Responsible: Site Administrator

Implementation, Monitoring and Evaluation: The Technology Coordinator will keep training records for staff proficiency training in the effective use of e-mail. The Technology Coordinator will also conduct an informal survey of teachers and administrators to collect data on the percentage who are using e-mail to improve home/school communications. The Technology Coordinator will also collect selected samples of teacher-parent e-mail correspondence. The Technology Coordinator and Principals will analyze the data to determine the percentage of teachers and administrators who are using e-mail to improve home/school communications. If benchmarks are not met, additional training and peer coaching will be provided to teachers and administrators in order to meet the objective.

Objective j1.1.3 By June 2014, MEUSD teachers and administrators will create informational web pages in order to better improve home/school communications.

Benchmarks:

Year 1 By June 2010, 60% of K–12 teachers and administrators will have created web pages for parents and students to be informed of course content, student projects, parent newsletters, homework assignments, and other relevant school information.

Year 2 By June 2011, 70% of K–12 teachers and administrators will have created web pages for parents and students to be informed of course content, student projects, parent newsletters, homework assignments, and other relevant school information.

Year 3 By June 2012, 80% of K–12 teachers and administrators will have created web pages for parents and students to be informed of course content, student projects, parent newsletters, homework assignments, and other relevant school information.

Year 4 By June 2013, 90% of K–12 teachers and administrators will have created web pages for parents and students to be informed of course content, student projects, parent newsletters, homework assignments, and other relevant school information.

Year 5 By June 2014, 100% of K–12 teachers and administrators will have created web pages for parents and students to be informed of course content, student projects, parent newsletters, homework assignments, and other relevant school information.

Person Responsible: Site Administrator

Implementation, Monitoring and Evaluation: On an ongoing basis, with analysis in January and June of each year, the Technology Coordinator will keep training records for staff proficiency training in effective web page design and production. The Technology Coordinator and site technology mentors will monitor the development, posting and updating of teacher and administrator web pages. The Technology Coordinator and site technology mentors will analyze district and site web sites to determine the percentage of teachers and administrators who have created web pages to improve home/school communications. If benchmarks are not met, then additional training and peer coaching will be provided to teachers and administrators in order to meet the objective.

3k. Monitoring and Evaluation of the Curriculum Component:

The objectives, benchmarks and timeline for each of the MEUSD Curriculum Goals have been included in the goals listed above, as well as the person(s) responsible for monitoring progress towards meeting the benchmarks and adhering to the timeline. The benchmarks and timeline are specific and realistic, ensuring that the stakeholders responsible for implementing the plan can easily discern what steps will be taken, by whom, and when.

The MEUSD District Technology Advisory Committee will monitor and evaluate progress towards each of the Curriculum goals yearly. At the end of each school year, the district's Technology Coordinator will convene a district technology meeting to review all aspects of the district's Technology Plan. Results will be reported to the Superintendent and to the local Governing Board. In the event that a Curriculum benchmark is not being met, modifications will be made as explained in the narrative for each goal, in order to successfully accomplish each objective and benchmark.

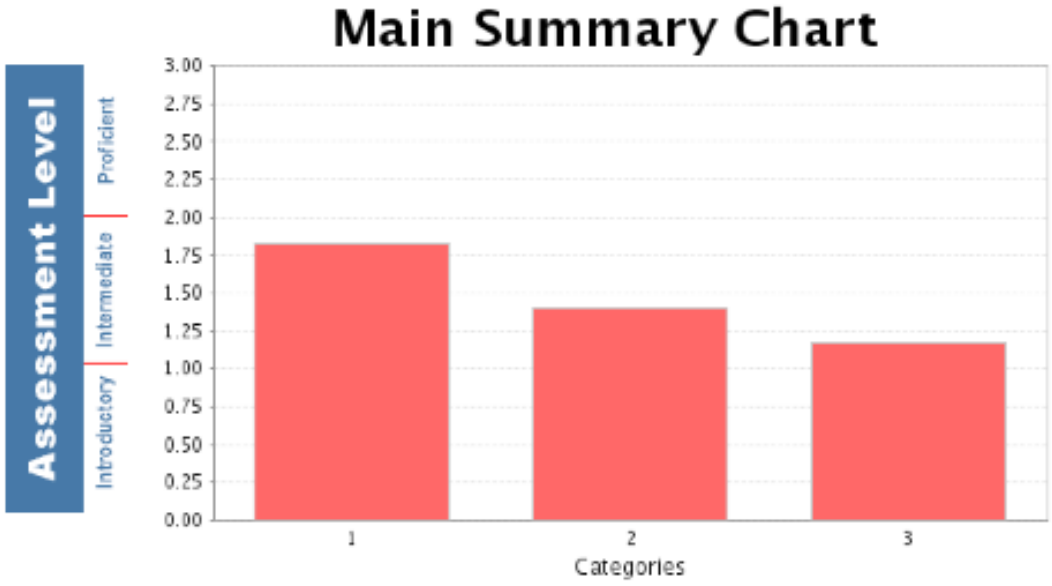
4. PROFESSIONAL DEVELOPMENT COMPONENT

4a. Summary of the Teachers' and Administrators' current Technology Skills and Professional Development Needs

The technology skills of the staff and administration are in an emerging state. Many of the teacher technology skills are specific to programs used within the classroom or used in the computer lab. One of the goals of this Educational Technology Plan is to provide a blueprint for sustained professional development for teachers, administrators and support staff to support the positive use of technology as a learning and support tool within our classes.

The plan provides for teacher training and support opportunities to increase levels of teacher proficiency in skills identified by the EdTechProfile, an assessment tool which measures teachers' general computer knowledge and personal use of technology and, as teachers gain more advanced knowledge and skills, their professional use of technology as an instructional and learning tool. The EdTechProfile (CTAP[2]) proficiency assessment is completed annually to help determine MEUSD teachers' and administrators' current technology skills. The following figure from the EdTechProfile website summarizes the May 26, 2008 proficiency results for MEUSD staff:

Mountain Empire Unified District has 85 credentialed teachers, this chart represents the assessment summary for 74 teachers or 87%. It is important to note that this includes both fully completed and partially completed assessments.



1 Computer Knowledge and Skills (Includes 74 in calculation)

2 CCTC Program Standard 9: Using Technology in the Classroom (Includes 66 in calculation)

3 CCTC Program Standard 16: Using Technology to Support Student Learning (Includes 64 in calculation)

Looking at the data:

16% measured proficient in overall Computer Knowledge and Skills.
7% measured proficient in overall skills for Standard 9.
5% measured proficient in overall skills for Standard 16.

In the subcategories of Computer Knowledge and Skills, teachers and administrators are most proficient in word processing and email and least proficient in database and spreadsheet. Disaggregating the data, teachers and administrators have similar skill levels in most areas, with administrators having slightly higher proficiency in email and word processing and lower skills in database and spreadsheet. With 27% of teachers and administrators reporting proficiency in internet skills and 22% in presentation, these are areas that will require focused professional development in order to support the plan's curriculum goals for technology use to support teaching and learning.

Proficiency levels in all skills measured by Standards 9 and 16 are low in all subcategories, with less than 15% reporting proficiency in all skills except 9d (using computer applications to manage records and communicate through printed media) and 9e (using email and collaboration via computers). To support the plan's curriculum component, professional development will have to go beyond personal skills and address the ability of teachers to use technology in the classroom and use technology to support student learning.

4b. Goals for providing professional development opportunities based on staff needs assessment and Curriculum Component goals:

As funding allows, this plan aims to create a professional development program that provides all staff with the skills necessary to bring technology into the classrooms to support student learning. The District believes it is important for credentialed staff to possess observable technology skills so they are able to act as peer coaches, as well as creating a school community that is technology-based and student centered.

The District's model will interweave curriculum, technology and teaching strategies matched to student needs and then applied to classroom experiences. This aspect of the model incorporates and supports the importance of teacher competence and her/his ability to support student learning through educational technology.

The District's model will be further supported through a decision-making process that has been demonstrated to be effective in the staff development process when integrating technology with student needs. The process is outlined below:

- Define District curricular standards.
- Define specific tasks students will be doing.
- Define interactions between students, technology, and teachers.
- Describe materials and equipment needed for use by teachers and students.
- Define where and how long activities will take place.
- Identify assessments to evaluate student work, and

- Identify a process for informing students, other teachers, parents, and administrators of the extent to which the learning standards are reached or exceeded.

The strength and foundation of an organization's ability to utilize technology to encourage its students to become life-long learners depends on the degree of their professional competency with a wide range of technologies, as much as it depends on an infrastructure that encourages the use of technology through systems that are thoughtful, accessible and user-friendly. Professional competency is developed through a support system founded on continuous training and support.

The professional development goals were developed to provide a systematic professional development program that is based on regular assessment of skill levels and ongoing training that targets needs as identified in the EdTechProfile Assessment.

Goal 4b.1 Provide Effective and Ongoing Professional Development to Support Teaching and Learning

Objective 4b.1.1 By June 2014, 100% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Benchmarks:

Year 1: By June 2010, 80% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Year 2: By June 2011, 85% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Year 3: By June 2012, 90% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Year 4: By June 2013, 95% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Year 5: By June 2014, 100% of the teaching staff and administrators will have taken the EdTechProfile Technology Assessment Profile Survey (CTAP^2).

Person Responsible: Site Administrators, Director of Educational Technology, Technology Coordinator, and the District EdTechProfile Administrator.

Implementation, Monitoring and Evaluation: The District EdTechProfile administrator will survey the EdTechProfile Technology Assessment Profile Survey for each teacher and administrator in the spring (April 30th deadline) annually. The results will be sent to

the Superintendent and the site administrators. Site administrators will insure that each staff member takes the Technology Assessment Profile Survey. A report on the attainment will be presented to the DTAC by June.

Objective 4b.1.2 By June 2014, 90% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey

Benchmarks:

Year 1: By June 2010, 50% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey.

Year 2: By June 2011, 60% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey.

Year 3: By June 2012, 70% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey.

Year 4: By June 2013, 80% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey.

Year 5: By June 2014, 90% of all teachers and credentialed administrative staff will be proficient in six of the seven areas on the EdTechProfile Technology Assessment Profile Survey.

Person Responsible: Superintendent, Site Administrators, District EdTechProfile administrator.

Implementation, Monitoring and Evaluation: When feasible, the District uses the services of CTAP Region 9, which has developed three levels of technology certification: Level I, personal proficiency, suggests an individual has the personal skills to utilize various aspects of technology for personal use; Level II, instructional proficiency, suggests a teacher has the ability to use technology as an instructional tool; and Level III suggests staff have the ability to mentor others as they improve their personal and professional technology skills.

In the past, on-site trainings, off-site workshops and conferences, summer mini-institutes, and ongoing peer coaching were offered to help staff members make progress towards the “Proficient” level in the following EdTechProfile ($CTAP^2$) skill

areas: General Computer Knowledge/Skills, effective use of the Internet, efficient management and use of E-mail, desktop publishing skills, the creation and use of spreadsheets, the use of presentation software such as PowerPoint, and the effective integration of instructional technology.

Budget cuts have made these impossible for the next academic year. To provide a cost effective and anytime access to high quality professional development, resources will be created and shared on the web such that teachers can login at their convenience and complete learning tasks designed to develop the skills they need to improve their EdTechProfile report. A lead teacher will oversee the website. Resources will include links to free trainings, tutorials, professional development, personal learning environment development, online classes, and research for reading. Faculty meetings will allow time for break-out sessions by the seven learning topics. Minimum days will allow large blocks of time for teachers to work on their skills under the supervision of someone skilled in the topic so that questions can be addressed immediately. The web-based training will be designed to address the multiple learning styles of teachers. Video podcasts will offer audible and visual directions. A discussion board on the website will also allow questions to be addressed on a regular basis as teachers work at their own pace. Personal learning networks will also be demonstrated and modeled so that teachers learn how to keep up with the many changes happening in technology. A monthly evaluation of the usefulness of the site will set in motion changes to the site and administrator required participation.

Some of the web resources will be grouped as follows:

- Use of technology tools and software applications to improve academic achievement on CAT 6 (a California standards test) and CAHSEE (California High School Exit Exam).
- Review and selection of effective, research-based courseware for reading, language, and math.
- Ability to teach information literacy skills, appropriate and ethical use of technology, and Internet safety, as well as to integrate the use of those skills into academic assignments.
- Ability to teach basic technology skills and to integrate the use of those skills into academic assignments.
- Ability to develop and/or use grade-appropriate technology skills checklists.
- Knowledge of technology-based assistive devices available for special needs students.
- Use of e-mail and web pages to improve home/school communications.
- Use of videoconferencing for instructional and professional activities.
- Use of *Making the Grade* software (provided by the district).
- Introduction to CTAP (California Technology Access Program) Online courseware.

As funding allows, the District Technology Advisory Committee will offer additional opportunities for professional development, including:

- District staff development days
- San Diego County Office of Education Technology Classes
- Technology Conferences (Computer Using Educators Technology Conference)
- District Mini-Institutes
- Summer workshops
- *CTAP* Online courses

The Principals, Technology Advisory Committee, and the district Technology Coordinator will coordinate the staff development sessions. Instructors will include the district Technology Coordinator, ROP technology teacher, qualified technology lead teachers, and SDCOE/CTAP9 Ed Tech project specialists.

In addition to providing Professional Development in the EdTechProfile computer knowledge and skill areas as described above, the district will also provide training on the topics described in Standards 9 and 16 – in order to support the implementation of the Curriculum component – and training in emerging technologies, current research on technology use in the classroom, and digital citizenship. The delivery methods and instructors will be the same as described for the technology skills.

To assist teachers in going beyond personal use of technology and begin to integrate technology into the curriculum, site administrators will identify skilled teachers to present skills to other teachers at each site. Teachers will be encouraged to seek help from other teachers at their site. The use of new technology methods in the classroom will be documented with a video camera for further addressing of the new methodology. The teacher using the software will present their classroom experience to the rest of their colleagues at the next grade-level or department meeting and the group will provide input on the effectiveness of the new method. Videos can also be posted on the District website.

***4c. Monitoring and Evaluation of the Professional Development Component*:**
The objectives, benchmarks, and implementation timeline are included in the goals listed above, as well as the person(s) responsible for monitoring progress towards meeting the benchmarks and adhering to the timeline. The benchmarks and timeline are specific and realistic, so that the stakeholders responsible for implementing the plan can easily discern what steps will be taken, by whom, and when.

Site Administers will use classroom formal and informal observations to make recommendations for individual teacher professional development. The District EdTechProfile administrator will survey the EdTechProfile Technology Assessment Profile Survey for each teacher and administrator in the spring of each year. The results will be sent to the Superintendent and the site administrators. Data will be used to help

determine the focus of the following year's staff technology skills training. Site administrators will insure that each staff member takes the Technology Assessment Profile Survey and that teachers have access to professional development opportunities.

The MEUSD District Technology Advisory Committee will monitor and evaluate progress towards each of the Professional Development goals annually. At the end of each school year, the district's Technology Coordinator will convene a district technology meeting to review all aspects of the district's Technology Plan. Results will be reported to the Superintendent and to the local Governing Board. In the event that a Professional Development benchmark is not being met, modifications will be made as explained in the implementation, monitoring and evaluation narrative for each objective.

5. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT AND SOFTWARE COMPONENT

5a. Existing Infrastructure, Hardware, Technical Support and Software

The existing infrastructure, hardware and software has been described in sections 3a and 3b of the Curriculum component.

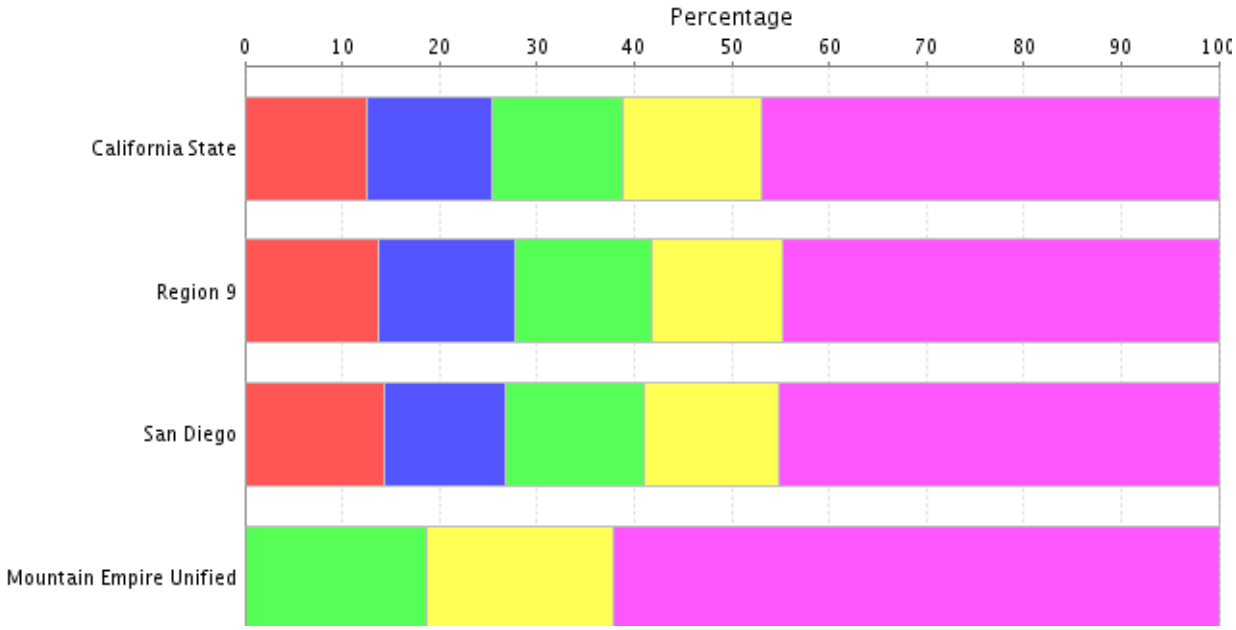
Data from the California School Technology Survey provides additional information about the technology available to support teaching and learning. The survey was designed and administered by the California Department of Education (CDE) and the California Technology Assistance Project (CTAP) to assess the availability and distribution of educational technology resources in California's K-12 public schools. Findings include the following:

Technology by School Type – Mountain Empire Unified School District, 2007-08

	District Students per Computer	County Students per Computer
Elementary	3.2	3.9
Middle	4.3	3.2
High	2.9	3.7
Continuation	1.9	1.9
Alternative	2.5	3.7
Community Day	1.3	1.4

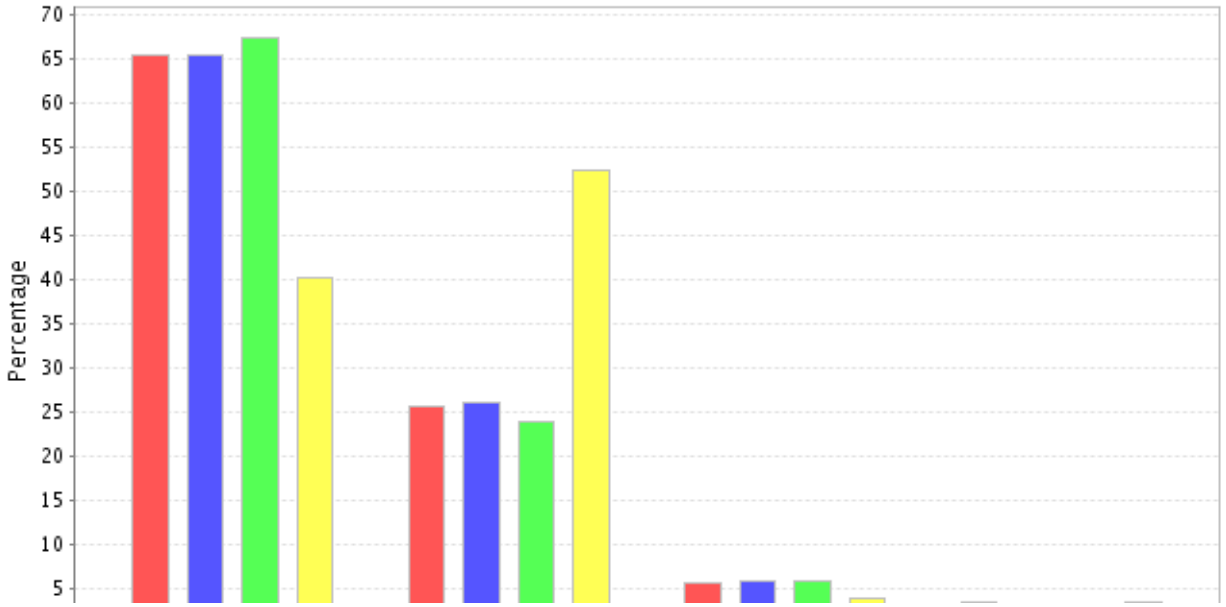
The School Technology Survey indicates that the district has no computers newer than three years old, and indicates a loss of equipment due to non-replacement of broken equipment.

A Comparison of Local Area Computer Ages

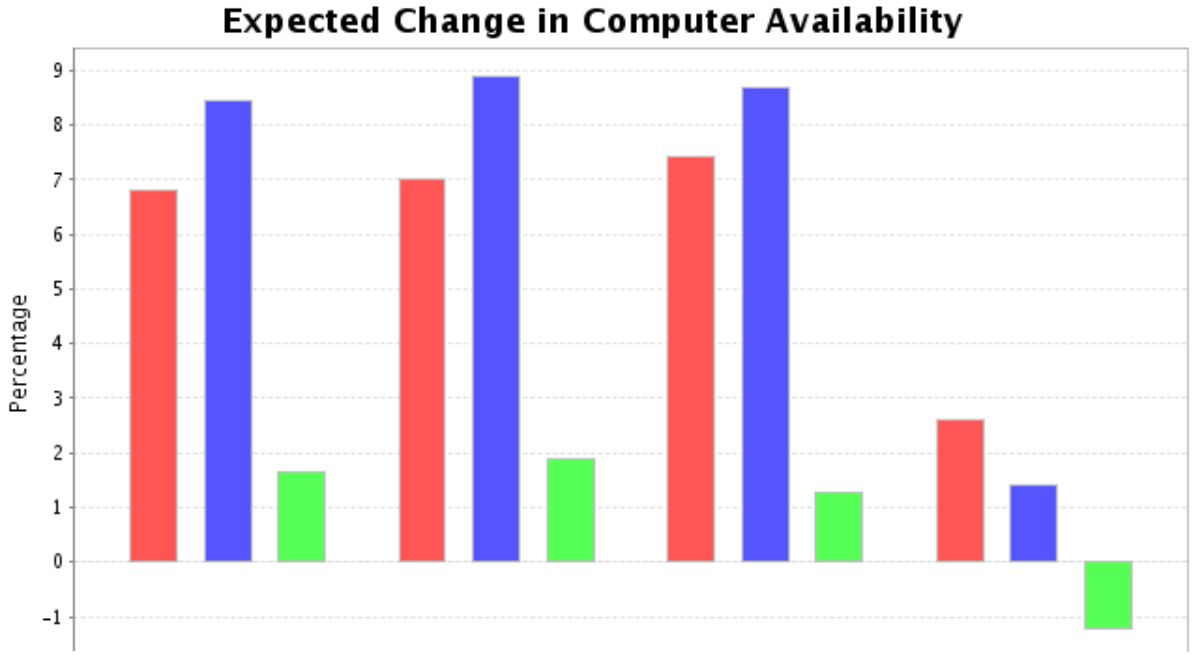


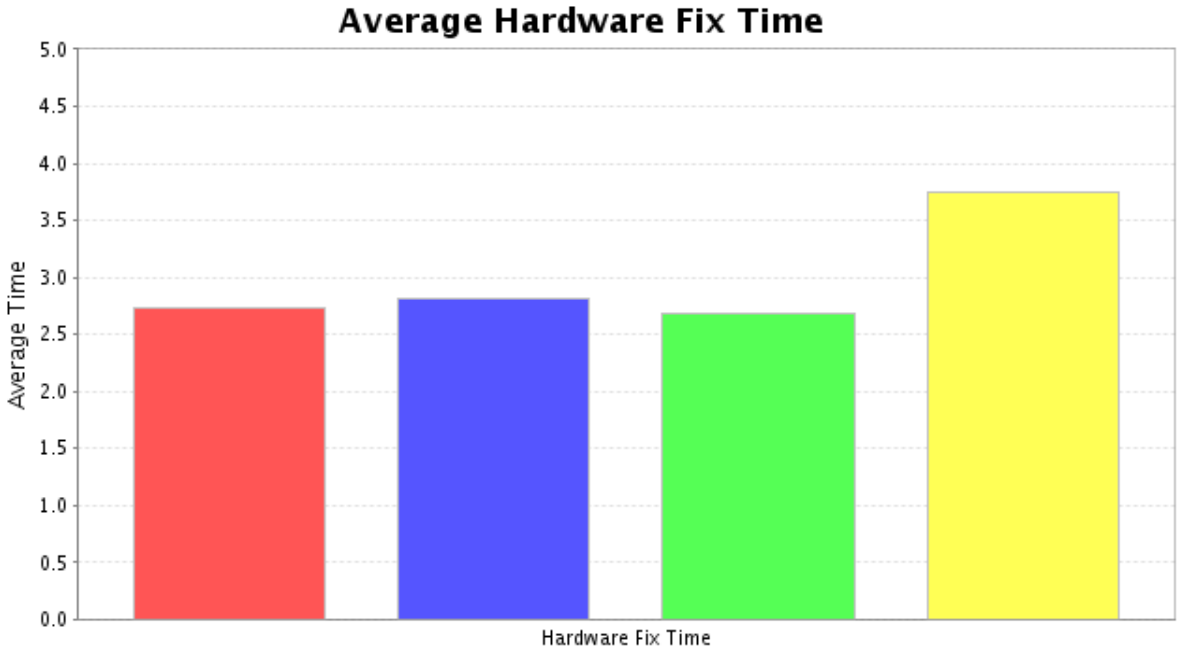
The survey also indicates a much higher percentage of computers in the lab setting than the trend demonstrated by the state, the region, or the county.

Equipment Locations at Mountain Empire Unified School District, the County, the Region and the State During the Last Eighteen Months



This survey also indicates fewer computers overall available in the classrooms. The inventory is not being replaced or repaired as computers and other technology pieces are damaged or broken. Repairs take longer than expected.





Current Technical Support: The district employs a full-time Technology Coordinator. The middle/high school, Potrero, Clover Flat, Pine Valley, Descanso, and Campo elementary schools fund part-time computer lab technicians. The Alternative Education Programs use the District Technology Coordinator to support their programs. Network maintenance, expansion of services and connectivity are provided from the District.

5b. Infrastructure, Hardware, Technical Support and Software Needs

High-speed Internet IP connectivity is the backbone on which most MEUSD educational technology services will be delivered in the next 5 years. This concept and the small size and remote location of the District combine to mandate reliable infrastructure and bandwidth to provide enhanced and supplemental learning experiences for the students of the District. All platforms should facilitate adoption of any other emerging technology that is suitable and supports video, speech, and data transmission. The curriculum standards require that students use real-time applications in the researching of math, science, social studies and English (language arts) tasks. The increase in volume of this traffic over our system has doubled in the past several years and teachers project a five-fold increase in the next two to five years. As a basic threshold, this District needs are:

- Increased high-speed access with high reliability District-wide.
- Low District-wide total cost of ownership (TCO).
- Adequate security, and
- Long-term technical support for the entire network.

To accomplish the goals of this plan, the following outlines the type and costs of technology to be acquired with district and site funds, including provisions for interoperability of components that the District will need:

Infrastructure Needs

The Technology Coordinator has requested funds to upgrade the district servers. The number of computer users on the network is rapidly expanding. In addition, district email accounts were established for all classified, certificated, and administrative staff. There is therefore a critical need to expand the capacity of the district servers to accommodate the growth of the network.

Upgrade the School-Based Servers: The majority of the schools need to acquire a site server to hold local teacher and student accounts, shared district software, data files for MAP, in order to share the workload with the District server. The servers will come out of site funds.

A plan to upgrade, replace and expand existing computer inventory: Mountain Empire teachers are requesting that classrooms be fitted with enough computers to allow for group work in the classroom setting. Lesson designs involve multiple events taking place in the classroom and not all students needing to make use of the computers at the same time. A second request is for the ability to spontaneously go to the Internet and search for information or visuals needed at that “teachable” moment. With the exception of the computer labs, many of the computers in the district are older. They are not capable of running many of the new programs and are beginning to require excessive maintenance. These older computers will need to be replaced within the next two years.

Continue to seek standards based software: All purchases will be designed to support the goals outlined in the District Educational Technology Plan. The District Technology Advisory Committee needs to collaborate with each grade level staff to compile a list of needed software upgrades and to evaluate future purchases. All new software should correspond to district academic goals and focus. Software should focus on student achievement and be research-based. Over the next five years all major software purchases need to be server-based and should be uniform throughout the district. Therefore, all purchases need to be approved through the technology office.

Technical Support Needs:
The district will continue to employ a full-time Technology Coordinator. The middle/high school, Potrero, Clover Flat, Pine Valley, Descanso, and Campo elementary schools fund part-time computer lab technicians. The Alternative Education Programs use the District Technology Coordinator to support their programs. As equipment and technology resources are added, the option to restore the position of technology coordinator aide will be considered, based on the status of the district budget. In the meantime, technical support will be expanded through the implementation of a student technology training elective. Our technology-savvy middle/senior high students will be trained to assist staff with basic troubleshooting of routine hardware and software problems. In addition, as staff members make progress towards attaining the CTAP Performance Levels, there will be an increased number of technology mentors on staff. The Technology Coordinator will also continue to provide technical support and troubleshooting assistance.

MEUSD will continue to maintain a relationship with the Technology Department at the San Diego County Office of Education (SDCOE). As a full service district, we utilize the technology resources from SDCOE. If we experience trouble with our fiber backbone, SDCOE provides support.

Goal 5b.1 Acquire Technology Resources and Technical Support Needed to Implement the Curriculum and Professional Development Components
Objective 5b.1.1 By June 2014, there will be adequate hardware, software and support to meet the components of this plan.

Benchmarks:

Year 1:

- Buy and configure three new servers for use at the schools: Pine Valley, Campo, and Clover Flats/Jacumba.
- All technology requests (hardware and software) are sent to Technology Coordinator via Mytechdesk.org through the site secretary or lab aide.
- Purchase one CTAP Online account for the District CTAP online coach.

- Purchase CTAP online accounts for interested certificated personnel.
- Develop and distribute a schedule of technology training classes.
- Renew contract with the San Diego Office of Education to provide tech support on an as-needed basis.
- Start a rotation cycle to purchase replacement computers allowing students to progress with the current technological needs of the 21st Century. And
- Student volunteers to be trained and assist the Technology Coordinator per ROP competences.
- Site computer lab technicians will be trained in school site technological troubleshooting.
- Purchase remote access software for use by the Technology Coordinator.
- The Technology Coordinator will receive training and earn certificates necessary for the position.

Year 2:

- Upgrade servers as needed.
- Renew the CTAP Online accounts.
- Continue the rotation cycle to purchase replacement computers.
- Develop and distribute a schedule of technology training classes.
- Renew contract with the San Diego County Office of Education to provide tech support on an as-needed basis. And
- Continue to seek student volunteers.

Year 3:

- Upgrade servers as needed.
- Renew the CTAP Online accounts.
- Continue the rotation cycle to purchase replacement computers.
- Develop and distribute a schedule of technology training classes.
- Renew contract with the San Diego County Office of Education to provide tech support on an as-needed basis. And
- Continue to seek student volunteers.

Year 4:

- Upgrade servers as needed.
- Renew the CTAP Online accounts.
- Continue the rotation cycle to purchase replacement computers.
- Develop and distribute a schedule of technology training classes.
- Renew contract with the San Diego County Office of Education to provide tech support on an as-needed basis. And
- Continue to seek student volunteers.

Year 5:

- Upgrade servers as needed.
- Renew the CTAP Online accounts.
- Continue the rotation cycle to purchase replacement computers.
- Develop and distribute a schedule of technology training classes.

- Renew contract with the San Diego County Office of Education to provide tech support on an as-needed basis. And
- Continue to seek student volunteers.

Person Responsible: Director of Educational Technology, and the Technology Coordinator

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5c. Benchmarks and Timeline for obtaining the required Infrastructure, Hardware, Technical Support and Software:

The original District goal of equipping each classroom with a teacher workstation package and at least two modern student workstations by June 2006 has proven to be unrealistic due to the present budget crisis. During the life of the plan, there are significant hardware, software and support issues that will be addressed by the DTAC, District Director of Technology, District Technology Coordinator, District Superintendent, and District Business Manager in order to implement the goals of this plan. As funds become available, the district will aim to adhere to the timeline outlined in 5b.

5d. Monitoring and Evaluation of the Infrastructure, Hardware, Technical Support and Software Component:

The District Director of Technology, Technology Coordinator and Technology Advisory Committee will continue to work with the Business Office and Superintendent to prioritize the Hardware, Software, Infrastructure and Tech Support needs so that goals may be met as the funding becomes available. The Technology Coordinator and the Director of Technology will be responsible for overseeing and approving all equipment and software purchases. The District Technology Advisory Committee will assist in monitoring installations and evaluating progress towards effective implementation and adequate tech support services.

In July and January of each year, the Director of Technology will make a report to the Superintendent and to the DTAC outlining progress in attaining the goal. Should there be a need for further intervention to ensure progress towards meeting the goal, recommendations will be made by the DTAC and modifications will be made as needed and as funding allows.

6. FUNDING AND BUDGET COMPONENT

6a. List of established and potential funding sources and cost savings:
MEUSD needs to establish an ongoing technology budget for support of the district Technology Plan. The budget will consist of confirmed funds (general and categorical), as well as available grants and one-time monies.

Funding for technology is a challenge. The Funding and Budget components will be reviewed, evaluated, and updated at the end of every school year by the Director of Technology, Technology Coordinator, Technology Advisory Committee and Business Manager.

Established and potential technology funding sources include:

- E-rate
- K-12 Voucher Program also know as Microsoft Settlement
- Carl Perkins – used in the ROP Computer technology program
- Enhancing Education Through Technology (EETT) formula grant
- College Preparation Partnership Program (CPPP)
- Title I, III, and VII
- Special Education Local Plan Area funding (SELPA)
- MEUSD General fund
- Community Based English Tutoring grant
- School Improvement Program (SIP)
- Gifted and Talented Education (GATE) funds
- ROP funds and the Perkins Grant

Present and Future Cost Savings
The following strategies will continue to be used to help reduce the cost of implementing the MEUSD Technology Plan:

- Use of CTAP state and regional group discounts to purchase electronic learning resources.
- Use of SDCOE networking services for advice and assistance with hardware, software and infrastructure planning and/or purchases.
- Use of SDCOE and CTAP Region 9 staff for professional development (curriculum and/or educational technology).
- Grants opportunities are regularly sought (assistance from SDCOE and CTAP Region 9 staff).
- E-rate funding to supplement the cost of the infrastructure.
- Use of long-term maintenance contracts to reduce costs. And
- Staff members attend the local and regional conferences and workshops (SDCUE, CUE, SDCOE, NECC, etc.) to keep abreast of cost-effective uses of technology, as well as funding opportunities.

6b. Estimated Implementation Costs (total cost of ownership):

The cost of implementing this plan is outlined below. Funding will be sought from District funds, State and Federal project funds, the federal E-rate program, and other outside sources for high speed internet connections, upgrading the infrastructure with a DS3 connection, router, switches, servers, backup, shelving and UPS.

Technology Budget for MEUSD 2009-2010 School Year

Item	Category	General Fund	Other	Amount
Tech Related Salaries	2400	20000	26000	46000
Software & Supplies	4300	2000	10000	12000
Staff Development	5200	1500	0	1500
Hardware/Computers/Repair	5600	15000	10000	25000
Hardware – server	6400	0	5000	5000
TOTAL		38500	51000	89500

Technology Budget for MEUSD 2010-2011 School Year

Item	Category	General Fund	Other	Amount
Tech Related Salaries	2400	20000	28000	48000
Software & Supplies	4300	2000	12000	14000
Staff Development	5200	2000	0	2000
Hardware/Computers/Repair	5600	15000	12000	27000
Hardware – routers, switches	6400	0	13000	13000
TOTAL		39000	65000	104000

Technology Budget for MEUSD 2011-2012 School Year

Item	Category	General Fund	Other	Amount
Tech Related Salaries	2400	20000	30000	50000
Software & Supplies	4300	4000	12000	16000
Staff Development	5200	2500	0	2500
Hardware/Computers/Repair	5600	15000	14000	29000
Hardware – server	6400	0	8000	8000
TOTAL		41500	64000	105,500

Technology Budget for MEUSD 2012-2013 School Year

Item	Category	General Fund	Other	Amount
Tech Related Salaries	2400	20000	32000	52000
Software & Supplies	4300	6000	12000	18000
Staff Development	5200	3000	0	3000
Hardware/Computers/Repair	5600	14000	17000	31000
Hardware – wireless access points	6400		2400	2400
TOTAL				

Technology Budget for MEUSD 2013-2014 School Year

Item	Category	General Fund	Other	Amount
Tech Related Salaries	2400	20000	32000	52000
Software & Supplies	4300	8000	12000	20000
Staff Development	5200	3500	0	3500
Hardware/Computers/Repair	5600	14000	19000	33000
Hardware – server	6400	0	8000	8000
TOTAL				

6c. District Replacement Policy for Obsolete Equipment

The District recognizes the need to establish and implement a policy for replacing obsolete equipment. A formal policy has been developed and will be in place pending board approval. In general, any computers that are too outdated to effectively run the programs on the district network will need to be declared obsolete. The district will use existing and identified funding sources to support the replacement of obsolete equipment, as well as to increase the number of computers in the classrooms. The district intends to implement an obsolete equipment policy for computer hardware, scheduled to go into effect by June, 2009. The following table indicates the policy.

Computer Hardware Replacement Plan Funding Source

Computer Hardware	Replacement Schedule	Funding Source
Classroom computers	Every Five Years	District funds, site funds, grants
Administrative and support computers	Every Five Years	District funds, site funds, grants
District backbone servers	Every Five Years	District funds, grant

Site backbone servers	Every Five Years	District funds, grants
District Core Switch and Site Switches	Every Five Years	District funds, site funds, grants
Classroom Switches	Every Five Years	District funds, site funds, grants

Currently, machines that not capable of supporting student learning due to being outdated are removed from the network and stored in a central location at the district warehouse complex to be surplused and recycled.

Districts minimum standards for obsolete equipment: Any PC with less then 2.1 Ghz processor, 80 Gigabytes hard drive, 1 Gigabyte of RAM, Pentium IV , and Windows XP Professional.

Districts minimum standards for purchasing of new computers: PC: 3.0 Ghz dual core proecssor, 160 Gigabyte Hard Drive, 2 Gigabytes or RAM, Windows XP Professional/Vista Ultimate, RW-DVD/CD Rom, with Ethernet, and wireless connectivity.

6d. Monitoring and Evaluation of Funding/Budget Component:

The Administrative Team will work closely with the School Board and the District Technology Advisory Committee to communicate technology-related funding priorities. As financial resources become available, the funding priorities will be reviewed and the related funds will be encumbered to meet those priorities. The Administrative Team and DTAC will pursue all potential resources and partnerships for providing additional technology-related funding in support of Curriculum, Professional Development, and Infrastructure goals. The feedback loop will be ongoing, with monthly monitoring of the budget and quarterly meetings with existing and potential partners.

7. MONITORING AND EVALUATION COMPONENT

7a. Process for Evaluating the Plan's Overall Progress and Impact on Teaching and Learning:

Evaluation of the MEUSD Technology Plan will be ongoing and will consider each of the goals and benchmarks listed in this document. Each of the MEUSD technology plan components includes a description of the evaluation instruments and methods for measuring the impact of technology on achieving the district's curricular goals. Evaluation tools include standardized test results, instructional software assessment reports, student technology skills checklists, sample student and staff projects, training attendance sheets, and EdTechProfile (CTAP) Proficiency Assessment data.

The district's Technology Advisory Committee is an active, informed membership. Each team member is an advocate for technology use in education, and serves as a technology leader in the District and in the community. As the team continues and expands its work during the five years of technology plan implementation, subcommittees will be formed to be responsible for tasks associated with achieving the determined goals and objectives. These subcommittees will address the key issues relating to technology-enhanced academic achievement and staff development, as well as guidelines for standards-based assessments, software review and evaluation, Internet policies and procedures, technical specifications for equipment, and the establishment of partnerships for expanding technology resources.

A district-wide technology audit, which provides an inventory of hardware and software, will be conducted yearly.

7b. Evaluation Timeline

The Curriculum, Professional Development, Infrastructure and Budget components of the plan each include a timeline for evaluating the accomplishment of the goals, objectives, and annual benchmarks. The established timelines for monitoring and evaluation will enable the District to assess its progress towards successful plan implementation. The Technology Advisory Committee and district Administrative Team will monitor and implement the scheduled evaluations.

7c. Process for Reporting Monitoring and Evaluation Results

Evaluation procedures will be cyclical in order to address the rapid changes in technology and allow for adjustments in the District's Technology Plan in a timely manner. These efforts also are aimed at providing stakeholders (students, teachers, administrators and community members) buy-in and input, in addition to assessment.

The Technology Advisory Committee will work closely with the district Administrative Team, who will provide regular reports to the school site council and to the School Board, as well as soliciting feedback and recommendations. At the end of each school year, the district's Director of Technology will convene a district technology meeting to review all aspects of the district's Technology Plan. Results will be reported to the Superintendent and to the local Governing Board. This ongoing communication, combined with the scheduled monitoring and evaluation of the plan, will help to ensure the successful accomplishment of the district's goals for the effective integration of technology.

8. EFFECTIVE COLLABORATIVE STRATEGIES WITH ADULT LITERACY PROVIDERS

8a. Description of Adult Literacy Providers and Their Collaboration on Program Development and Implementation

The MEUSD provides the only adult literacy classes in our community. There is no "community" of Mountain Empire, only rural outlying towns whose children are served by our district.

Adults have access to technology through several existing programs. The Regional Occupational Program (ROP) offers a weekly computer training opportunities. These free classes are open to all residents of the local communities, who are at least 16 years old. Classes are offered one evening per week at the high school campus. The school district provides this program in our computer lab and the teacher is one of our technology teachers for the high school, the adults have full access to all the technology resources of the school and will benefit from the technology plan improvements.

Another successful program implemented by the district is the Community Based English Tutoring program (CBET) funded through Proposition 227. All three school sites offering the CBET program have computer labs that participants can access during the day or after school hours, and adults in the program are given opportunities throughout the year to learn about the technology their children are using.

As the District is the only provider of adult literacy services on a regular basis within an hour and one/half drive time, a collaboration exists in the area of curriculum, staff and supervision. At the annual Technology Plan review, the Superintendent will review relevant data, including new information about any additional adult literacy providers that have offered, or might offer, services in the area, and together with the Governing board and stakeholders adjust planned activities to accommodate any shared resources and literacy services that might emerge.

9. USE OF EFFECTIVE, RESEARCH-BASED METHODS AND STRATEGIES

9a. Description of Relevant Research behind Selected Strategies and Methods

<u>Proven Methods for Student Learning and Teaching</u>

The MEUSD Technology Plan is based on effective, research-based strategies for improving student learning and enhancing classroom instructional practices.

<u>Computer-Assisted Instruction</u>
The Technology Plan includes the implementation of a variety of integrated instructional software programs, which will be used extensively by students in their core curriculum classes. These activities include drill-and-practice exercises for reviewing and

strengthening mathematics concepts, interactive games to reinforce science and social studies instruction, exploratory simulations to supplement science concepts, and language arts challenges for building grammar and vocabulary skills (especially for English Language Learners). Future instructional software purchases will: 1) provide individualized instruction, especially for special needs and ELL students, 2) be research-based and CLRN approved, and 3) include applications that help improve student language arts (reading, writing, listening, speaking) and mathematics skills.

While the body of research on the effectiveness of computer-assisted instruction has shown mixed results, two major recent studies showed that students using computer-assisted instruction, including the use of integrated learning systems, drill-and-practice software, and computer tutorials, showed "impressive gains" in student academic achievement (Sivin-Kachala & Bialo, 2000; Kulik, 1994).

Computers as Tools for Problem-Solving, Conceptual Development, and Critical Thinking

Computers will be used as tools to promote higher-order thinking skills among students. Students in grades K through 12 will be engaged in individual and group projects that incorporate technological tools to encourage collaborative, inquiry-based learning, as well as creative expression. Projects will incorporate the exploration of Internet resources (such as online databases, simulations, and informational web sites) to conduct research, the use of technology-based communications (e-mail, word-processing), and the use of desktop publishing and presentation software (including scanned images, video, animation, and audio). The goal is to integrate technology in order to effectively engage students in activities that promote critical thinking, analyzing, making inferences, and problem-solving.

The integration of technology into instruction is most effective "when students and teachers take advantage of its sophistication and versatility to support higher-order thinking and conceptualization" (Ringstaff and Kelley, 2002). Best practices in this category come from organized classroom projects in which student teams are presented with a real-life problem or issue to address. Such projects are often cross-curricular, combining skills from the core subjects of mathematics, language arts (writing), science, and social studies, as well as the arts. These projects typically incorporate technology tools such as e-mail, Internet resources, spreadsheets (including charts and graphs), presentation software (such as PowerPoint), scanners, digital cameras, and video editing system (Ringstaff and Kelley, 2002).

Participation in such projects has been demonstrated to improve students' problem solving skills as well as communication skills. "Students using sophisticated technologies as everyday learning tools show marked growth in essential workplace skills. Moreover, such gains do not come at the expense of basic skills." (Penuel, Golan, Means & Korbak, 2000) "Research reviews also show increased student motivation, engagement, and self-esteem as well as improved school attendance and fewer dropouts" (Coley, 1997).

Effective Technology Integration

MEUSD teachers will learn to effectively integrate technology into their instruction through ongoing professional development, provided by the district Technology Coordinator, staff technology mentors, CTAP representatives from the San Diego and Imperial County Offices of Education.

Teacher Training is Essential

An overall goal of the MEHSD Technology Plan is for the teaching staff to take an active role in the process of integrating technology into the curriculum, in order to provide compelling ways for all students to meet State Academic Standards. In order for technology to be effectively integrated into the classroom, teachers need to feel confident in using the software, Internet resources, and equipment with students. Teachers need to be able to envision effective methods for incorporating technology to engage students in meaningful learning. Developing these skills will require well-designed, ongoing professional development and support, the development of personal learning networks, and time for planning and collaboration with colleagues.

"Virtually every major study of successful technology use finds that teacher professional development is key" (Office of Technology Assessment, 1995).

"Teachers trained in how to use technology use it more often and in ways that result in student gains. Conversely, a lack of training is a significant barrier to success" (Mann & Shafer, 1997).

Teachers "not only need familiarity with equipment, but – more important – they need to see and practice the most productive ways of using (technology) to support learning. They need time to explore, reflect, collaborate with peers, and engage in hands-on learning" (Sandholtz, Ringstaff & Dwyer, 1997).

Teachers need training, assistance and support in making the transition from traditional methods of teaching (lecture, recitation, seat work) to technology-based instruction (supporting student collaboration, inquiry, problem solving, and interactive learning (Ringstaff & Kelley, 2002).

Administrative Leadership is Key

The Technology Advisory Committee will strive to provide the vision, leadership and support necessary to build a school culture where technology is seamlessly integrated as an effective tool for teaching and learning at all grade levels.

"Our experiences in working with (school) sites confirm what the research literature says, that leadership is the single most important factor affecting the successful integration of technology. This is true at the state level and at the school level. For example, the state with the most successful technology programs are those that have had visionary governors, legislators, and DOE staff who are committed to the use of

technology as a tool for teaching and learning. Similarly, the schools that have made the most progress are those with energetic and committed leaders.
-It is especially important for principals to have a vision of what is possible through the use of technology, and to be able to work with others to achieve the vision.
-Effective principals lead by example, have a clear idea about how technology can support best practices in instruction and assessment, use technology fluently, and participate actively in professional development opportunities.
-Supportive principals highlight the efforts of teachers who attempt to use technology to improve teaching and learning.
-Effective principals facilitate shared input and decision-making by showing interest and trust in the decisions of school technology committees."
(SEIR*TEC, 2002)

Sources

Office of Technology Assessment, Teachers and Technology: Making the Connection (Washington, DC: U.S. Government Printing Office, 1995).

Dale Mann & Edward Shafer, "Technology and Achievement," The American School Board Journal (July 1997).
www.asbj.com/achievement/ci/ci10.html

Judith Sandholtz, Cathy Ringstaff & David Dwyer, Teaching with Technology: Creating Student-Centered Classrooms (New York: Teachers College Press, 1997).

Cathy Ringstaff & Loretta Kelley, "The Learning Return on our Educational Technology Investment: A Review of Findings from Research", (San Francisco, CA: WestEd, 2002).

"Factors that Affect the Effective Use of Technology for Teaching and Learning," SouthEast and Islands Regional Technology in Education Consortium -SEIR*TEC (2002)
www.seirtec.org/publications/lessondoc.html

9b. Development and Utilization of Innovative Strategies

Online Courses for Students

Due to its remote location and small teaching staff, MEHS is unable to offer the wide variety of rigorous academic courses and curricula, especially AP and Honors courses, available to students at larger urban high schools. Students are able to take online courses through APEX Learning and local community colleges. These courses have included classes that may otherwise not have been available to the students, including AP Statistics, AP Psychology, and advanced technology courses.

Online Courses for Educators

MEUSD encourages its teachers to be lifelong learners; however, the nearest college campus is at least an hour's drive from our remote communities. Online courses have provided teachers and administrators with an alternative method for earning college credits, taking courses for professional growth, or simply pursuing an educational interest.

There are professional growth online courses for teachers and administrators. Educators may choose from semester courses that count towards advanced degrees to mini-courses that focus on specific professional skills. Providers of online courses for educators may include, but are not limited to, the following:

- TeachStream (www.teachstream.com)
- San Diego State University - Office of Distributed Learning (www.sdsu.edu/dl)
- California Virtual Campus (www.cvc.edu/catalog)
- CTAP Online (www.ctaponline.org)
- University of Maryland University College – Certificates in Distance Education (www.umuc.edu/grad/certificates/dist_ed.html)
- University of Wisconsin – Distance Education Certificate Programs (www.uwex.edu/disted/depd/index.html)
- UCSD extension courses for teachers

Videoconferencing

The BorderLink Project funded a room-size videoconferencing unit for MEHS. The videoconferencing units have been used to connect teachers in our remote location with professional development workshops at the San Diego County and Imperial County Offices of Education, as well as with professional meetings, trainings and college classes at distant locations. The district intends to expand the use of desktop videoconferencing (utilizing IP videoconferencing) throughout the district, for both instructional and professional development purposes.

Instructional Television

District students and staff have access to an extensive selection of instructional programs through the San Diego County Office of Education's Instructional Television (ITV) channel or webcast. A detailed schedule of educational programming is provided monthly by SDCOE. Depending on the scheduled time slot for the ITV broadcast of a desired program, teachers may either show a program "live" or videotape the program for later use (as per "fair use" policies). This allow the expansion of programming to include not only standards-based instructional videos, but also specialized channels that are focused on such topics as professional development for classified and certificated staff, hot topics of interest to parents, resources for ELL students and parents, and post-secondary educational opportunities.

Appendix C – Criteria for EETT Technology Plans

(Completed Appendix C is REQUIRED in a technology plan)

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

- For corresponding EETT Requirements, see the EETT Technology Plan Requirements (Appendix D).
- 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**
The plan should guide the district's use of education technology for the next three to five years. (For a new plan, can include technology plan development in the first year)	1	The technology plan describes the districts use of education technology for the next three to five years. (For new plan, description of technology plan development in the first year is acceptable). Specific start and end dates are recorded (7/1/xx to 6/30/xx).	The plan is less than three years or more than five years in length. Plan duration is 2008-11.
2. STAKEHOLDERS CRITERION Corresponding EETT Requirement(s): 7 and 11 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Not Adequately Addressed**
Description of how a variety of stakeholders from within the school district and the community-at-large participated in the planning process.	2	The planning team consisted of representatives who will implement the plan. If a variety of stakeholders did not assist with the development of the plan, a description of why they were not involved is included.	Little evidence is included that shows that the district actively sought participation from a variety of stakeholders.
3. CURRICULUM COMPONENT CRITERIA Corresponding EETT Requirement(s): 1, 2, 3, 8, 10, and 12 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**

a. Description of teachers' and students' current access to technology tools both during the school day and outside of school hours.	**3**	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.	**5**	The plan describes the typical frequency and type of use (technology skills/information and literacy integrated into the curriculum).	The plan cites district policy regarding use of technology, but provides no information about its actual use.
c. Summary of the district's curricular goals that are supported by this tech plan.	**6**	The plan summarizes the district's curricular goals that are supported by the plan and referenced in district document(s).	The plan does not summarize district curricular goals.
d. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan for using technology to improve teaching and learning by supporting the district curricular goals.	**7**	The plan delineates clear goals, measurable objectives, annual benchmarks, and a clear implementation plan for using technology to support the district's curriculum goals and academic content standards to improve learning.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
e. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan	**14**	The plan delineates clear goals, measurable objectives, annual benchmarks, and an implementation plan detailing how and when students will	The plan suggests how students will acquire technology

detailing how and when students will acquire the technology skills and information literacy skills needed to succeed in the classroom and the workplace.		acquire technology skills and information literacy skills.	skills, but is not specific enough to determine what action needs to be taken to accomplish the goals.
f. List of goals and an implementation plan that describe how the district will address the appropriate and ethical use of information technology in the classroom so that students and teachers can distinguish lawful from unlawful uses of copyrighted works, including the following topics: the concept and purpose of both copyright and fair use; distinguishing lawful from unlawful downloading and peer-to-peer file sharing; and avoiding plagiarism	**18**	The plan describes or delineates clear goals outlining how students and teachers will learn about the concept, purpose, and significance of the ethical use of information technology including copyright, fair use, plagiarism and the implications of illegal file sharing and/or downloading.	The plan suggests that students and teachers will be educated in the ethical use of the Internet, but is not specific enough to determine what actions will be taken to accomplish the goals.
g. List of goals and an implementation plan that describe how the district will address Internet safety, including how students and teachers will be trained to protect online privacy and avoid online	**19**	The plan describes or delineates clear goals outlining how students and teachers will be educated about Internet safety.	The plan suggests Internet safety education but is not specific enough to determine what actions will be taken to accomplish the goals of

predators.			educating students and teachers about internet safety.
h. Description of or goals about the district policy or practices that ensure equitable technology access for all students.	20	The plan describes the policy or delineates clear goals and measurable objectives about the policy or practices that ensure equitable technology access for all students. The policy or practices clearly support accomplishing the plan's goals.	The plan does not describe policies or goals that result in equitable technology access for all students. 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 clear goals, measurable objectives, annual benchmarks, and an implementation plan to use technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs.	21	The plan delineates clear goals, measurable objectives, annual benchmarks, and an implementation plan for using technology to support the district's student record-keeping and assessment efforts.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
j. List of clear goals, measurable objectives, annual benchmarks, and an implementation plan to use technology to improve two-way	**23**	The plan delineates clear goals, measurable objectives, annual benchmarks, and an implementation plan for using technology to improve two-way communication between home and school.	The plan suggests how technology will be used, but is not specific enough to know what action

communication between home and school.			needs to be taken to accomplish the goals.
k. Describe the process that will be used to monitor the Curricular Component (Section 3d-3j) goals, objectives, benchmarks, and planned implementation activities including roles and responsibilities.	**26**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding procedures, roles, and responsibilities.
4. PROFESSIONAL DEVELOPMENT COMPONENT CRITERIA Corresponding EETT Requirement(s): 5 and 12 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. **Summary of the teachers' and administrators' current technology proficiency and integration skills and needs for professional development**.	27	The plan provides a clear summary of the teachers' and administrators' current technology proficiency and integration skills and needs for professional development. The findings are summarized in the plan by discrete skills that include Commission on Teacher Credentialing (CTC) Standard 9 and 16 proficiencies.	Description of current level of staff expertise is too general or relates only to a limited segment of the district's teachers and administrators in the focus areas or does not relate to the focus areas, i.e., only the fourth grade teachers when grades four to eight are the focus grade levels.
b. List of clear goals, measurable objectives, annual	28	The plan delineates clear goals, measurable objectives, annual benchmarks, and an	The plan speaks only generally of professional

benchmarks, and an implementation plan for providing professional development opportunities based on your district needs assessment data (4a) and the Curriculum Component objectives (Sections 3d - 3j) of the plan.		implementation plan for providing teachers and administrators with sustained, ongoing professional development necessary to reach the Curriculum Component objectives (sections 3d - 3j) of the plan.	development and is not specific enough to ensure that teachers and administrators will have the necessary training to implement the Curriculum Component.
c. Describe the process that will be used to monitor the Professional Development (Section 4b) goals, objectives, benchmarks, and planned implementation activities including roles and responsibilities.	32	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.
5. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE COMPONENT CRITERIA Corresponding EETT Requirement(s): 6 and 12 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. Describe the existing hardware, Internet access, electronic learning resources, and technical support already in the district that will be used to support the Curriculum and	**33**	The plan clearly summarizes the existing technology hardware, electronic learning resources, networking and telecommunication infrastructure, and technical support to support the implementation of the Curriculum and Professional Development Components.	The inventory of equipment is so general that it is difficult to determine what must be acquired to implement the Curriculum and Professional

Professional Development Components (Sections 3 & 4) of the plan.			Development Components. The summary of current technical support is missing or lacks sufficient detail.
b. Describe the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support needed by the district's teachers, students, and administrators to support the activities in the Curriculum and Professional Development components of the plan.	36	The plan provides a clear summary and list of the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support the district will need to support the implementation of the district's Curriculum and Professional Development components.	The plan includes a description or list of hardware, infrastructure, and other technology necessary to implement the plan, but there doesn't seem to be any real relationship between the activities in the Curriculum and Professional Development Components and the listed equipment. Future technical support needs have not been addressed or do not relate to the needs of the Curriculum and Professional Development Components.
c. List of clear annual benchmarks and a timeline for obtaining the hardware, infrastructure, learning resources and technical	**39**	The annual 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.	The annual benchmarks and timeline are either absent or so vague that it would be difficult to determine what needs to

support required to support the other plan components identified in Section 5b.			be acquired or repurposed, by whom, and when.
d. Describe the process that will be used to monitor Section 5b & the annual benchmarks and timeline of activities including roles and responsibilities.	**39**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.
6. FUNDING AND BUDGET COMPONENT CRITERIA Corresponding EETT Requirement(s): 7 & 13, (Appendix D)	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. List established and potential funding sources.	**40**	The plan clearly describes resources that are available or could be obtained to implement the plan.	Resources to implement the plan are not clearly identified or are so general as to be useless.
b. Estimate annual implementation costs for the term of the plan.	**41**	Cost estimates are reasonable and address the total cost of ownership, including the costs to implement the curricular, professional development, infrastructure, hardware, technical support, and electronic learning resource needs identified in the plan.	Cost estimates are unrealistic, lacking, or are not sufficiently detailed to determine if the total cost of ownership is addressed.
c. Describe the district's replacement policy for obsolete equipment.	**42**	Plan recognizes that equipment will need to be replaced and outlines a realistic replacement plan that will support the Curriculum and Professional Development Components.	Replacement policy is either missing or vague. It is not clear that the replacement policy could be implemented.

d. Describe the process that will be used to monitor Ed Tech funding, implementation costs and new funding opportunities and to adjust budgets as necessary.	**43**	The monitoring process, roles, and responsibilities are described in sufficient detail.	The monitoring process either is absent, or lacks detail regarding who is responsible and what is expected.
7. MONITORING AND EVALUATION COMPONENT CRITERIA Corresponding EETT Requirement(s): 11 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
a. Describe the process for evaluating the plan's overall progress and impact on teaching and learning.	**43**	The plan describes the process for evaluation using the goals and benchmarks of each component as the indicators of success.	No provision for an evaluation is included in the plan. How success is determined is not defined. The evaluation is defined, but the process to conduct the evaluation is missing.
b. Schedule for evaluating the effect of plan implementation.	**44**	Evaluation timeline is specific and realistic.	The evaluation timeline is not included or indicates an expectation of unrealistic results that does not support the continued implementation of the plan.
c. Describe the process and frequency of communicating evaluation results to	**44**	The plan describes the process and frequency of communicating evaluation results to tech plan stakeholders.	The plan does not provide a process for using the monitoring and

tech plan stakeholders.			evaluation results to improve the plan and/or disseminate the findings.
8. EFFECTIVE COLLABORATIVE STRATEGIES WITH ADULT LITERACY PROVIDERS TO MAXIMIZE THE USE OF TECHNOLOGY CRITERION Corresponding EETT Requirement(s): 11 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Example of Not Adequately Addressed**
If the district has identified adult literacy providers, describe how the program will be developed in collaboration with them. (If no adult literacy providers are indicated, describe the process used to identify adult literacy providers or potential future outreach efforts.)	**45**	The plan explains how the program will be developed in collaboration with adult literacy providers. Planning included or will include consideration of collaborative strategies and other funding resources to maximize the use of technology. If no adult literacy providers are indicated, the plan describes the process used to identify adult literacy providers or potential future outreach efforts.	There is no evidence that the plan has been, or will be developed in collaboration with adult literacy service providers, to maximize the use of technology.
9. EFFECTIVE, RESEARCHED-BASED METHODS, STRATEGIES, AND CRITERIA Corresponding EETT Requirement(s): 4 and 9 (Appendix D).	**Page in District Plan**	**Example of Adequately Addressed**	**Not Adequately Addressed**

a. Summarize the relevant research and describe how it supports the plan's curricular and professional development goals.	**45**	The plan describes the relevant research behind the plan's design for strategies and/or methods selected.	The description of the research behind the plan's design for strategies and/or methods selected is unclear or missing.
b. Describe the district's plans to use technology to extend or supplement the district's curriculum with rigorous academic courses and curricula, including distance-learning technologies.	**48**	The plan describes the process the district will use to extend or supplement the district's curriculum with rigorous academic courses and curricula, including distance learning opportunities (particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources).	There is no plan to use technology to extend or supplement the district's curriculum offerings.