

**Technology Plan: Lakeside Union School District 2003-2008**

**District Information**

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Lakeside Union School: EETT Tech Plan Application

**Technology Plan Members**

Name	Title	Affiliation
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Mike McGrath	Principal	Lakeside School
Moises Contreras	Technology Coordinator/Teacher	Lakeside School
Glen Ogden	Teacher/Parent	Lakeside School
Mike Rude	Teacher	Lakeside School
Nancy Ayotte	Teacher	Lakeside School School Site Council
Laura Rude	Teacher	Lakeside School
Arlee Hall	Teacher/Parent	Suburu School /School Site Council
Margo Ogden	Teacher/Parent	Suburu School /School Site Council
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Phil Branch	Tech Support	CompuHelp Services
Neil Ratner	Network Consultant	Contra Costa Electrical

**Mission / Vision Statement**

*The Lakeside Union School District is committed to a quality educational program, responsive to the needs of its students within a safe nurturing environment. We are committed to building a partnership between school, parents, and the community that works together to meet the educational needs of all students. Our staff, students, parents, and community assume responsibility for each student's academic and personal success. Recognizing the worth and dignity of each student, the Lakeside Union School District prepares all students to achieve to their fullest potential. Our goal is to produce students who make informed decisions, as they become responsible citizens and productive members of society.*

**In the development of this technology plan it is evident that Lakeside is in need of improvements in the areas of Curriculum, Infrastructure and Professional Development. With these added improvements new ways to fund and monitor these needed changes are also being systematically explored and established. Although many improvements are currently in place and are ongoing, the goal of this plan is to solidify those needs and to continue to improve technology as a resource for student learning.**

**A. Curriculum**

***AI. Needs & Resource Assessment***

**Appropriate Technology to Meet the Needs of Teachers and Students**

All Lakeside Union School District students have access to appropriate technology to enhance the learning environment. No student is denied access because of gender, ability, socioeconomic level, language differences, handicapping condition, or other exceptionalities.

Emphasis in technology is to support the core curriculum for all students in forms of multimedia projects, writing assignments, research, basic keyboarding and assessments.

Both Suburu and Lakeside Schools are equipped with 32 workstation computer labs, which provide access for every teacher and student. Lab usage is based on a weekly access of about 45 minutes for all students. With availability for teachers to sign up according to their instructional needs.

School Libraries at both schools are equipped with Internet connection and Follett Software applications. These resources provide students with opportunities to research and gather information that enrich the core curriculum.

All classrooms in the District are equipped with a TV/VCR. Videos aligned to curriculum and state content standards are available through AV Media services, with weekly

deliveries on Wednesday and Friday. Orders are placed by phone (661-852-5846) or online (<http://learning.kern.org/media/>).

Student 3000 software is used for storing and analyzing student administration data which includes: demographics, attendance, grading and transcripts, student scheduling, test scoring, educational guidance, free and reduced lunch tracking, and student health module immunizations.

### **Current Use of Hardware & Software to Support Teaching & Learning**

District computer to student ratio is approximately 1 computer for every 12 students. The vast majority of computer workstations are located in networked school computer labs and libraries. Additional workstations are located in classroom and serve as standalone resources for both students and staff.

Current use of technology to enhance the learning environment for our students is essential. Technology is not taught as an isolated subject at Lakeside, but rather used as a tool to assist students in finding information, evaluating its worth, and demonstrating how to use information for specific purposes that support the core curriculum. Technology projects and lessons are integrated with classroom standard based lessons. Lessons are designed to motivate students to use technology to work beyond the normal school environment. Although technology is currently integrated into everyday standard content lessons, there is a need to develop a scope and sequence of student technology proficiencies for each grade level and each core subject.

School computer labs are networked through their LAN server and access is provided for all students. Lab usage in general for both schools is approximately 45 minutes weekly for each child providing opportunities for whole-group instruction, independent work, and electronic resource assessments. Lakeside School has a fulltime computer lab instructor to assist classroom teachers in grades 3-8 with integrating technology into weekly standard based lessons and curricular goals. Technology and information skills are taught and utilized in these weekly sessions. Every teacher is encouraged to incorporate technology into daily or weekly standard based lessons.

Advantage Learning Systems Star Reading and Star Math are software programs currently used that correlate to content standards in reading and math. These software assessments are given quarterly to 3<sup>rd</sup>- 8<sup>th</sup> grade students and are diagnostic and prescriptive in nature providing the classroom teacher and administrators with an effective method for monitoring individual and group progress. These software programs provide an effective vehicle for streamlining student learning and a process for communicating progress to parents.

Student records are managed through an Internet link to the Kern County Superintendent of Schools. MiniSoft software, Student 3000, uses a fully integrated student records management system designed exclusively for K-12 school districts. Student 3000 operates through HP3000 with the following integrated modules: Student Administration and Demographics, Attendance, Grading and Transcripts, Student Scheduling, Test

Scoring, Educational Guidance, Free and Reduced Lunch Tracking, and a Student Health Module (immunizations.)

This student management system is a Web-based information system that is compatible with the California Student Information System (CSIS.) Presently each of our students, upon enrollment, receives a randomly selected, student identifying number---there are no names transmitted across this system. Through this system in 2002/2003, we have successfully transmitted two state required reports---CBEDS and the R30-LCStudent Database info system. This database of information is used to analyze and monitor students throughout our District.

Technology is also being used to enhance home to school communication through our District's web site, <http://www.lakesideusd.org>. Current teacher maintained web sites provide parents and students with valuable information regarding homework, class assignments, lessons, student work, and handouts. Our District web site was developed in March of 2003 and has the availability to maintain sustained communication between parents, teachers, students, and members of the community. By providing opportunities of membership to parents, students, and teachers our web site is capable of extending communication through automated email bulletins and discussion threads. There is a need to in-service parents, students and teachers with the functionality and use of this site to help enhance and further this valuable resource now available to our school District. Internet resources are also available online for students, teachers and staff on our District web page.

### **District Curricular Goals**

Our District goals for each curricular area are the state standards. Prior to 2000 our Board adopted Grade Level Expectancies for grades K-6. The Grade Level Expectancies (GLEs) provide a core curriculum for all K-6 students in the Lakeside Union School District. These expectancies along with California State Standards constitute the core curriculum for each grade level and follow District adopted programs.

Technology will be used to enhance or reinforce the core curriculum in ways that both challenge students with greater depth and understanding while enriching their learning experience. Teachers will utilize materials and methods most appropriate for their students' needs. Library, research, information literacy and study skills are included in these goals and expectancies, and are to be applied in all subject areas.

Student assessment data is collected for every student in the District. This data allows us the ability to track individual students and specific target groups in ways that effectively monitor our educational programs. This information is utilized in examining our programs effectiveness, as well as strengths and weaknesses in instruction.

Academic Performance Index information for our District as reported on the [California Department of Education website](#), is as follows:

**Academic Performance Index (API) Growth report 2003-1999**

<b>2002-2003</b>	<b>2002 Base API</b>	<b>2003 API(growth)</b>	<b>Target Growth</b>	<b>2002-2003 Growth</b>	<b>Met Growth Target</b>
<b>Lakeside</b>	692	730	5	38	yes
<b>Suburu</b>	738	756	3	18	yes

<b>2001-2002</b>	<b>2001 Base API</b>	<b>2002 API(growth)</b>	<b>Target Growth</b>	<b>2001-2002 Growth</b>	<b>Met Growth Target</b>
<b>Lakeside</b>	710	709	5	-1	no
<b>Suburu</b>	735	757	3	22	yes

<b>2000-2001</b>	<b>2000 Base API</b>	<b>2001 API(growth)</b>	<b>Target Growth</b>	<b>2000-2001 Growth</b>	<b>Met Growth Target</b>
<b>Lakeside</b>	696	722	5	26	yes
<b>Suburu</b>	727	742	4	15	yes

<b>1999-2000</b>	<b>1999 Base API</b>	<b>2000 API(growth)</b>	<b>Target Growth</b>	<b>1999-2000 Growth</b>	<b>Met Growth Target</b>
<b>Lakeside</b>	640	696	8	56	yes
<b>Suburu</b>	728	727	4	-1	no

Each of our two schools have met or exceeded their API target growths three out of four years since the inception of California Standardized Testing and Reporting. In addition both schools have met their 2002-2003 school wide and comparable growth targets for all groups and subgroups. It is our goal to continue to meet our target growth each year. Our District will continue to use API performance, **Adequate Yearly Progress (AYP) reports**, and student assessment data to provide our District with needed information in assessing curricular needs, professional development, and examination of District programs.

There is a need to research and evaluate emerging technologies and software applications that adequately align with state content standards, promote student achievement, and improve student record keeping and assessment. Software selection to be used in our District must meet the needs of our students and District curricular goals. Online resources like [California Learning Resource Network](#), will be utilized to help in finding and evaluating electronic learning resources that both meet local instructional needs and embody the implementation of [California curriculum frameworks and standards](#).

The desired outcome of the Lakeside Union School District educational programs is to produce lifelong learners. The program will empower students with the knowledge and skills to successfully meet future tasks and challenges.

***A2. Goals and Implementation Plans***

**District Goals for Using Technology to Improve Teaching and Learning**

- Continually create and improve technology resources that will support curricular goals and benchmarks, promote mastery of state content standards, and strengthen communication between administrators, teachers, students, parents and community members.
- Promote integrating technology into each curricular area and move towards a project based learning method that adapts different learning modalities. A project-based learning method is a comprehensive approach to instruction. Where students participate in projects and practice an interdisciplinary array of skills from math, language arts, fine arts, geography, science, and technology
- Create a scope and sequence guide, which includes a wide array of standard based lessons integrating technology proficiencies for each grade level and each core subject.
- Development of District web page as a learning resource for students, parents, & community members.
- Build a strong partnership between the community and parents by providing trainings in basic computer skills, Internet navigation and functionality of District web page.

In an effort to make technologies more readily available to our students the Technology Committee of teachers, tech mentors, administrators, and community members will oversee the development of lessons and resources, implementation of needed trainings, and the growth of effective communication. Bimonthly grade level and departmental meetings will be used to focus on lesson planning and technology integration. These lesson planning meetings will be used as a guide as well as assurance that students are acquiring the necessary technology and information literacy skills appropriate for each grade and subject area. It is the goal of our district to ensure that technology is used to support the progress of each and every student. With the use of automated bulletins, threaded discussions and email the District would like to build an effective communication medium which will enhance the learning environment in ways that will save time, provide immediate feedback and make available much needed resources.

**Implementation Plan for Using Technology to Improve Teaching & Learning**

<b>Start Date</b>	<b>Projected Completion</b>	<b>Activity or Benchmark</b>	<b>Target Audience</b>	<b>Person Responsible</b>
May 2003	June, 2003	Creation of Technology Committee of Administrators, Teachers, Parents & Community Members	All Staff, Teachers, Administrators, and Community Members	Technology Committee
June 2003	Ongoing Annually	Creation of Annual monthly calendar meetings	Staff, Administrators, Members of Community	Technology Committee
March	May 26,	Technology Plan for	All Staff,	District

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2003	2003	County approval. Submit 3-5 year renewal	Teachers, Administrators, and Community Members	Superintendent, Administrators, and Technology Committee
May 2004	August 2004	Create a grade level Scope and Sequence of technology proficiencies for each grade level and core subject.	All Staff and Students	Technology Committee, Staff, Superintendent and Site Administrators
May 2004	Ongoing through 2008	Create a lessons and activities to coincide with Scope and Sequence of technology proficiencies	All Staff and Students	Technology Committee, Staff, Site Administrators
May 2003	June, 2003 Ongoing annually through June, 2008	Ctap <sup>2</sup> Proficiency and Survey	All Staff	Technology Committee, Administrators, and Staff
March, 2003	Ongoing thru June, 2008	Development of District web site promoting our instructional program, and enhancing home/school communication	All Staff, Students, and Community Members	Technology Committee, Administrators, and Staff
May, 2003	September, 2003	Evaluation of existing software and its alignment with state standards	All Students and Staff	Technology Committee member
September, 2003	Ongoing through June, 2008	Purchase of software that aligns with content standards and District Curricular Goals	All Staff, Students, and Community Members	Technology Committee and Staff
September, 2002	Ongoing through 2008	Student research page providing online assistance with homework, assignments and independent learning	All students	Technology Committee and all Staff members
September, 2003	Ongoing through 2008	Creation of a Teacher resource page containing standard based lessons and	All Staff members	Technology Committee and Staff

		online resources		
March, 2003	Ongoing through 2008	Teacher trainings of self maintained Web Sites	All staff members, parents, and students	Technology Committee and KCSOS design team.
September, 2003	Ongoing through 2008	Parent trainings of how to access and use District & teacher web sites as a resource for communication	Parents and Community members	Technology Committee
September, 2002	Ongoing through 2008	Continually search and expand online student learning resources	All students and staff	Technology Committee and Staff

***A3. Monitoring & Evaluation of Curricular Goals***  
**Monitoring Plan for Curricular Strategies & Methodologies**

- Annual evaluation by technology committee
- Regular to monthly meetings to address student achievement, curriculum integration, staff development, support services, infrastructure needs, and budget
- Results reported to School Board

**Indicators of Success**

- Quarterly Star Math & Star Reading assessments
- ISP monitoring of teacher maintained websites
- Annual CTAP<sup>2</sup> Survey and Proficiency growth reports.
- STAR Testing & API scores

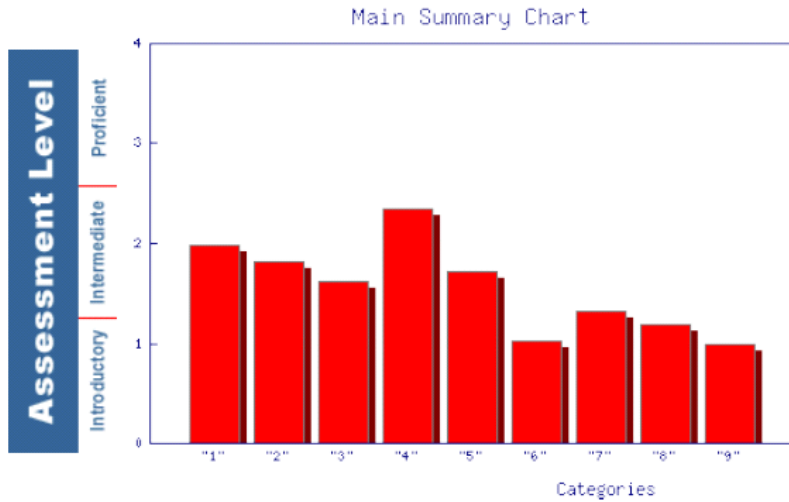
**B. Professional Development**

***B1. Needs & Resource Assessment***  
**Survey of Teachers and Administrators of Current Technology Skills and Needs for Professional Development**

As of November 2003, over 70 % of certificated staff participated and completed the CTAP<sup>2</sup> Proficiency Assessment, Technology Use Survey and Supplementary Survey. The following chart illustrates the District’s proficiency results for each general category:

Proficiency Chart for Lakeside Union School District  
 Certificated Staff  
 School type: Public  
 All subjects  
 All grades

**Lakeside Union School District has 59 credentialed teachers, this chart represents the assessment summary for 43 teachers or 73%. It is important to note that this includes both fully completed and partially completed assessments.**



- 1 General Computer Knowledge and Skills (Includes 43 in calculation)
- 2 Internet (Includes 43 in calculation)
- 3 Email (Includes 43 in calculation)
- 4 Word Processing (Includes 43 in calculation)
- 5 Publishing (Includes 43 in calculation)
- 6 Databases (Includes 43 in calculation)
- 7 Spreadsheets (Includes 43 in calculation)
- 8 Presentation Software (Includes 42 in calculation)
- 9 Instructional Technology (Includes 42 in calculation)

The results of these assessments and surveys indicate that certificated teachers lack proficiency levels in the following areas:

- General Computer Knowledge and Skills
- Internet
- Email
- Word Processing
- Publishing
- Databases
- Spreadsheets

- Presentation Software
- Instructional Technology

### **Appropriate Professional Development Opportunities in Technology**

Staff members at Lakeside have continual appropriate professional development opportunities available to them in several areas.

Currently our District has one CTAP Region 8, Level III Tech Mentor, who can provide teachers and staff ongoing support and trainings with Level I and Level II technology proficiencies. There is a need for the District to commit to schedule specific trainings for these proficiencies as well as offer professional development opportunities to meet the individual needs of each staff member as identified in technology surveys.

As part of our ongoing partnership with Kern County Superintendent of Schools our District has solicited ISP hosting services. This service agreement with KCSOS services provides our District with up to four teacher-training opportunities per year with the KCSOS Web Team. These trainings provide assistance in the development of our District web page with specific training in Manilla web browser editing tools. These trainings are tailored to meet the needs of our teachers for the creation of self maintained websites.

CTAP Region 8 provides professional development opportunities at little to no cost to all Kern County administrators and instructors throughout each school year in all identified areas of need. Scheduling of classes are tailored to meet the needs of teachers by providing weekend, nights and summer school opportunities.

Additional online professional development resources are available at [Connected University](#) at <http://cu.classroom.com/logon.asp>, [CTAP region 8](#) at <http://learning.kern.org/ctap/>, and [University of San Diego](#) online at <http://www.usd-online.org/>.

### ***B2 Goals & Implementation Plans***

#### **District Professional Development Goals:**

1. An immediate goal is to increase certificated participation of CTAP<sup>2</sup> Proficiency Assessment and Survey.
2. All professional development opportunities in the District will be aligned with identified needs of proficiency assessments and survey results or Technology Plan goals and objectives.
3. Increase the number of Certified Level I and Level II teachers and administrators by at least 5% per year.
4. Offer a minimum of 4 teacher and staff web page trainings per year.
5. Continually provide information on Professional Development opportunities that address individual staff needs based on continual monitoring of assessments and survey results.
6. Make effective use of CTAP Level III Mentor(s) in the District to provide on site needed trainings and support.

7. Provide staff development opportunities for staff members to collaborate, create, and share standards based lessons that align technology with grade level and subject area curriculum.
8. Increase the number of technology based lessons and resources available to teachers, students, and parents on District and teacher web sites.
9. The District will provide incentives to continually encourage staff integration of technology into all areas of the curriculum.
10. Staff integration of technology into the curriculum will be monitored and analyzed though the quantity and quality of teacher lessons, materials, and resources posted on individual websites.
11. Improvements in the Infrastructure of the District will align with these professional development goals by minimally providing a multimedia Internet accessible teacher workstation in every classroom.

**Implementation Plan for providing Professional Development Opportunities**

Based on the Lakeside Technology survey completed in May 2003 professional development will be provided for both administrators and teachers focusing on improving the teaching and learning of standards-based curriculum that promotes the use of new skills and experiences. Teachers will need to develop new lessons that incorporate technology in ways that enhance the learning environment for all our students. As improvements in our infrastructure improve with the purchase of new hardware and software carefully attention will be needed to see that appropriate trainings are given to ensure effective use of these new technologies. District encourages Professional Development by offering teachers early release time to attend conferences, in-services, trainings and courses. In addition a commitment is to be made to offer staff members professional development training in technology, which utilizes the District’s, buy back program.

<b>Projected Start Date</b>	<b>Projected Completion</b>	<b>Activity or Benchmark</b>	<b>Target Audience</b>	<b>Person Responsible</b>
March, 2003	Annually through June, 2008	Offer teacher and staff web page trainings each year.	All staff	KCSOS Web Team and CTAP Tech Mentor
June, 2003	Ongoing through June, 2008	District will provide a minimal of one buy-back professional training opportunity each year.(Based on recommendation of Technology Committee)	All staff	Technology Committee and In-Service Committee
May, 2003	Ongoing through June, 2008	Provide information to staff on CTAP, Region 8 Professional Development opportunities.	All staff	Technology Committee and CTAP Level III Tech Mentor
June, 2003	Ongoing through June, 2008	Provide CTAP Level I and Level II trainings in Lakeside Computer Lab	All staff	Technology Committee, and CTAP Level III

				Tech Mentor
June, 2003	Ongoing through June, 2008	Increase Level I and Level II certified teachers and administrators by 5% per year.	All staff	CTAP Level III Tech Mentor
June, 2002	Ongoing through June, 2008	Provide ongoing trainings on all Electronic Learning Resources available at each site.	All staff	Technology Committee
August, 2003	Annually through June 2008	Participation in CTAP <sup>2</sup> Proficiency Assessment and Survey completed and updated every 12-18 months 90-100% of certificated staff.	All staff	District Superintendent, Administrators
August, 2004	Annually through 2008	Bimonthly grade level/departamental meetings(lesson planning & sharing)	All staff	Site Principals

***B3 Monitoring & Evaluation***

**Process for Monitoring Implementation of Professional Development**

Our District will continue to use CTAP<sup>2</sup> proficiency assessments and surveys to monitor appropriate growth in Professional Development. All certificated staff members will be monitored to insure that assessments and surveys are completed and updated every 12-18 months. Results from these surveys and assessments will be used to determine need of professional development for staff and teachers. District Superintendent and Site Administrators will be responsible that assessments and surveys are conducted in a timely manner. Technology Committee members will assess the results so that careful monitoring of needs are met and progress towards Goals and Implementation are being reached. If it is determined that projected Implementation Plans are not being achieved in a timely manner the Technology Committee will meet and develop corrective measures to ensure that goals in Curriculum and Professional Development components of this plan are being met.

**C. Infrastructure, Hardware, Technical Support, & Software**

***C1. Needs & Resource Assessment***

**Existing Hardware Used by Teachers, Students, & Administrators to Support Activities**

Existing District hardware inventories include:

- District office has 2 Pentium IV and 1 donated Pentium III with peer-to-peer network copier and laser printer.

- Intel Celeron 1.7 Ghz with 512 Mb RAM, 40 Gb IDE 7200 RPM Drives are located at each T-1 line connection for both schools running Linux and using a Squid Proxy firewall and Squid Guard Filtering software.
- Lakeside School has a total of 50 computers used by teachers for instruction at our site. 33 multimedia workstations are located in the computer lab, 15 Pentium III workstations in classrooms, and 2 multimedia workstations in the library.
- Lakeside Computer lab LAN Server is an Intel SC5000 Server Solution (2) 1.8 Ggz XEON Processors 1Gb memory, (2) 36 Gb SCSI Drives, 10k RPM with WIN2000 Server.
- Lakeside Computer lab also contains 1 Kodak DC215 digital camera, 1 HP ScanJet 6200C scanner, and 1 Xerox DocuprintN17 Laser Printer.
- Suburu School has a total of 63 computers used by teachers for instructional use. 31 workstations are located in classrooms and 32 are located in the computer lab.
- Suburu Computer Lab LAN Server is an Intel Microtronics Server solution (2) 1.8 Ghz XEON Processors 1 Gb memory, (2) 36Gb SCSI Drives, 10k RPM, 7 Bay CD Tower with WIN2000 Advanced Server.
- Every classroom in the District is equipped with a TV/VCR.

### **Hardware Needed by Teachers, Students, and Administrators to Support Activities**

Hardware that is needed to support the goals in the Curriculum and Professional Development components of this plan include:

- There is a need to provide every teacher in the District with a multimedia, Internet accessible computer.
- Color Laser Printers for both schools.
- Computer to TV scan converters for each classroom.
- Smart Boards & Multimedia Projector for both school computer labs.
- Suburu lab needs to update and upgrade workstations to multimedia units, dated Pentiums need to be antiquated.
- A mobile curriculum lab cart with a wireless hub, laptop computers, and video projector for both schools is needed to provide access to technologies and learning opportunities in classrooms.
- Computer to student ratio needs to be increased at both schools and for the district to meet the minimum recommended by the state.

### **Electronic Learning Resources that Exist and are Needed by Teachers, Students, and Administrators to Support Activities**

Learning resources that currently **Exist** are primarily accessible only in each school's computer lab and library.

- Minisoft Student 3000 is a web based student information system compatible with the California Student Information System(CSIS). This management system is presently used for storing data for every student in our District.
- Computer labs and libraries at both schools are connected with non dial-up Internet.

- Follett software applications are available to every student in our computer labs and libraries.
- Suburu computer lab contains several CD-Rom software programs that provide students with practice drills in various subject areas. Various Deskjet printers are located in each workgroup station.
- Lakeside computer lab contains 33 multimedia workstations with Win2000 Professional and Office Premium Edition. Internet connection
- Advantage Learning Star Reading & Star Math are computer-adaptive, norm-referenced applications which provide immediate prescriptive data on student performance.
- Lakeside School's web site contains a Student Research web page which provides students with needed online resources.
- Less than 1/3 of existing teacher workstations at Lakeside School have Internet connection.

Electronic Learning Resources **needed** to support Curriculum and Professional Development goals include:

- There is a need to install Microsoft Office Premium Edition on all teacher/student classroom workstations.
- The development of a Teacher Resource page on our District's Web site with standard based lessons, professional development opportunities, teacher tools and online resources is needed.
- Although every student has access to technology on campus via school labs and libraries there is an eminent need to extend resources available in our computer labs and libraries into each classroom.
- There is a need to provide Internet access and online resources to every classroom.
- There is a need to provide access to all teachers with our Web-based school information system.
- Implementation of a Wide Area Network (WAN) is needed to provide shared applications of electronic resources that support curriculum and professional development goals.

**Existing Networking and Telecommunication Infrastructure Needed by Teachers, Students, and Administrators to Support Activities**

Based upon current inventories, the **existing** Networking and Telecommunication Infrastructure includes:

- Internet Service Provider for the District is the Kern County Superintendent of Schools (KCSOS).
- T1 line that carries 1.5 Mbps with a speed of 100 megabits or greater but less than 155 megabits connects Suburu campus to the Kern County Superintendent of Schools Office.
- T1 line that carries 1.5 Mbps with a speed of 100 megabits or greater but less than 155 megabits connects Suburu School and Lakeside School.

- Lakeside Computer Lab LAN Server is an Intel SC5000 Server Solution (2) 1.8 Ggz XEON Processors 1Gb memory, (2) 36 Gb SCSI Drives, 10k RPM with WIN2000 Server.
- Suburu Computer Lab LAN Server is an Intel Microtronics Server solution (2) 1.8 Ghz XEON Processors 1 Gb memory, (2) 36Gb SCSI Drives, 10k RPM, 7 Bay CD Tower with WIN2000 Advanced Server
- Multimode fiber optic backbone is presently installed at both building pods at Suburu School.

Networking and Telecommunication Infrastructure **needs** to achieve goal of the Curriculum and Professional Development portions of this plan include:

- Wireless Hub solution is needed during Lakeside School modernization phase.
- Electrical panels and breakers need to be upgraded to provide a minimum of 4 workstations for every classroom.
- Minimum of 4 Ethernet drops per classroom with CAT 5 patch cords to the wall jacks and to IDF patch panel and switch.
- A multimode fiber optic backbone is presently installed at both building pods at Suburu but are in need of terminal equipment.
- Wireless or wire hub solution for kindergarten section at Lakeside and portables at Suburu.
- Additional fiber optic wiring is needed in Suburu building pod/portable classrooms.
- Additional Ethernet switches are needed to meet the needs of Ethernet drops at both schools.
- Fiber optic or copper wiring is needed from additional Lakeside switches to the server in the computer lab to T1 exit point.
- There is a need to expand the capabilities of each school's network server to create individual teacher and student user accounts which will create personal directories to share files and applications across the network to every student and teacher/student workstations

#### **Physical District modifications needed to support Activities**

First stages of modernization construction at Lakeside School are scheduled to begin in June 2003. In these plans each classroom at Lakeside School will be adding 3 to 4 additional 120-volt electrical outlets per classroom. At the conclusion of all stages of construction a minimum of 5 electrical outlets will exist in every classroom as well as power strips on two walls with outlets every 4 feet. In addition 1-inch conduit connection with RG11 cable will connect each classroom TV to our central Video Distribution Center. There is a need to add Ethernet drops in each classroom with IDF patch panel for each classroom during this modernization construction as well.

#### **Technical Support Needed by Teachers, Students, and Administrators to Support Activities**

Existing Technical Support is provided with independent contractors. CompuHelp Services is currently contracted through our District on a monthly retainer. Services are

rendered on an hourly basis with an allotment of 10 hours per month. This allotment is shared between both schools based on eminent need. Additional hours are contracted on an as need basis. Technical services provided through CompuHelp Services include but is not limited to service and repair of workstations, installation of hardware and software, network configuration and maintenance, and consulting.

Tech support is also provided at Suburu School through a stipend position. This support includes help with maintenance of school lab workstations, classroom workstations and installation of software. Lakeside School computer lab instructor also assists with installation of software and maintenance of lab workstations.

**Technical Support needed:**

Currently technical support is most needed in the maintenance of computer workstations located in networked school computer labs, school libraries, administration offices and standalone teacher workstations. It is estimated that technical support for the Suburu lab alone is 2 hours per day or 10 hours weekly. In addition each school site must continually update squid filtering software to ensure security for safe Internet navigation.

As computer to student ratios increase there will be a need to address the total cost of maintaining workstations, installation of software programs, and network maintenance. A more systematic approach for resolving technical support is desperately needed. As it stands today there is no definitive process in reporting technical problems and resolution of these problems. As the infrastructure continues to grow to meet the needs outlined in the Curriculum and Professional Development components of this plan, the Technology Committee will need to find a way to provide teachers, students and staff with the necessary technical support needed. It is evident that there will be an eminent need for a network administrator / trainer to manage the planning, installation and repair of network workstations for both sites.

There will be a need by the Technology Committee to continually monitor available State contracts and grant funds to reduce support costs and increase efficacy of maintaining our infrastructure.

**Security and Safety Issues needed to Support Activities of Teachers, Students, and Administrators**

**Existing** Security Safety includes:

- Squid proxy firewall & Squid Guard filter is self-maintained at each site.
- Acceptable Use Policies provided for students.
- Minisoft Student System 3000 is an encrypted secure student information system.

Security Safety **Needs** include:

- District Antivirus protection plan
- Acceptable Use Policy for Teachers and Staff
- Continually review and update all security and filtering systems. Each school site must maintain and continually update Squid filtering software.

- Create a written policy for antiquated equipment.

**Experts Involved in Inventory Acquisition**

Consultants and experts from the Kern County Superintendent of Schools will be continually used to provide infrastructure, hardware, and software solutions. In addition various independent consultants will also be used for additional support (Compuhelp Services, Serban Sound, ARRC Technologies, DataComm, Advanced Communication, ect.)

***C2 Goals and Implementation Plan***

**Infrastructure Goals to Support Curriculum and Professional Development Needs**

An immediate goal in this plan is to create a solid District infrastructure capable of supporting the needs of the Curriculum and Professional Development components outlined in this plan. It is important that significant planning is developed to ensure our District’s foundation is capable of meeting emerging technologies that ensure all students access to future learning opportunities. These goals include:

- Purchase and install a District Anti-Virus protection plan for every node in the District.
- Provide a minimum of 1 multimedia workstation for every classroom in the District with non-dialup Internet connection.
- Provide school email accounts for every teacher and administrator in the district.
- Continually monitor and develop electronic resources and make them available on District Website.
- Increase current computer to student ratio (1 to 12) to **at least the minimum** recommended by the state or current research.
- Consult and plan a possible wire or wireless hub solution for portables at Suburu.
- Install a minimum of 4 Ethernet wiring drops for every classroom in the District to meet the minimum recommended by the state or current research.
- Create and configure Active Directories for each school site network server to assign individual user accounts for all administrators, teachers, and students.
- Increase technical support services to meet the needs of growing and expanding infrastructure.
- Continue to seek consultation from many sources to reduce and lower costs.
- Create a plan for implementing a Wide Area Network (WAN) to share applications and learning resources across the District.

**Implementation Plan**

<b>Projected Start Date</b>	<b>Projected Completion</b>	<b>Activity or Benchmark</b>	<b>Target Audience</b>	<b>Person Responsible</b>
June 2003		Modernization planning & technology meeting	All students and staff	District Superintendent and Technology Committee
June 2003	December 2003	Wireless Networking install for Suburu portables	All students and staff	District Superintendent, Technology

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				Committee, Private Contrators (CompuHelp)
June 2003	June 2005	Modernization of Lakeside School electrical outlets and panels.	All students and staff	District Superintendent and District MOT Director
January 2004	June 2004	Lakeside Networking Project: Scope One <i>*See Appendix A</i>	All students and staff	District Superintendent, Technology Committee, Private Contractors
July 2004	December 2004	Lakeside Networking Project: Scope Two <i>*See Appendix A</i>	All students and staff	District Superintendent, Technology Committee, Private Contractors
January 2005	June 2005	Lakeside Networking Project: Scope Three <i>*See Appendix A</i>	All students and staff	District Superintendent, Technology Committee, Private Contractors
August 2005	June 2006	Lakeside Networking Project: Scope Four <i>*See Appendix A</i>	All students and staff	District Superintendent, Technology Committee, Private Contractors
August 2006	June 2007	Lakeside Networking Project: Scope Five <i>*See Appendix A</i>	All students and staff	District Superintendent, Technology Committee, Private Contractors
June 2003	Continually updated yearly through 2008	Acceptable Use Policy for all Administrators, Teachers, and Staff	All Administrators, Teachers, and Staff	District Superintendent and Technology Committee
June 2003	Continually updated yearly through 2008	Update District student Acceptable Use Policy	All students	District Superintendent and Technology Committee

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June 2004	August 2003 ongoing through 2008	Antivirus Protection plan	All students and staff	District Superintendent and Technology Committee
September 2004	Ongoing through June 2008	Provide school email accounts for every teacher & administrator	All staff	District Superintendent and Technology Committee
September 2004	Annually through June 2008	Creation of Active Directory to add individual user accounts at Lakeside School.	All staff and students	Technology Committee, Network Administrator
September 2003	Ongoing through 2008	Create student resource page for Suburu web site	All students	Technology Committee, Tech Mentor(s), and all staff
June 2003	Ongoing through September 2008	Provide a minimum of 1 multimedia workstation for every classroom in the District.	All students and staff	District Superintendent and Technology Committee
June 2003	Ongoing through September 2008	Minimum of 4 Ethernet drops for every classroom.	All students and staff	District Superintendent, and District MOT Director
August 2004	Ongoing through 2008	Increase technical support to coincide with improvements in Infrastructure and support Curricular and Professional Development components.	All students and staff	District Superintendent and Technology Committee
June 2003	Ongoing through June 2008	Continue to monitor ways to lower costs, and fund need improvements.	All students and staff	District Superintendent and Technology Committee
June 2004	Ongoing through 2008	Consult and create plans for a Wide Area Network	All students and staff	District Superintendent and Technology Committee
June 2003	Ongoing through June 2008	Continually monitor all filtering and virus protections	All students and staff	District Superintendent and Technology

				Committee
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***C3 Monitoring and Evaluation***

**Monitoring Plan for Acquisition of Needed Hardware, Infrastructure, Learning Resources, and Technical Support**

The acquisition of hardware, infrastructure, learning resources, and technical support will be analyzed on a monthly to annual basis. District Superintendent, site Principals and Vice Principals, and District Technology Committee will be responsible for conducting the reviews. Expenditure reports, inventory lists, and budget reports will be used to help chart progress. Use of CTAP<sup>2</sup> proficiency assessments and survey results will also be used in collecting data to assist in monitoring infrastructure acquisitions and its effects on Curricular and Professional Developments components of this plan. Results will be reported to the School Board.

**D. Funding and Budget Component**

***D1. Needs and Resource Assessment***

**Identify all Costs Associated with Implementing Each Component**

- ◇ Lakeside Union School District uses general funds, API money, and Booster Club and other community resources to provide hardware and software for the educational purposes on both campuses. The same programs will be used to fund future technology expenditures. The following percentages identify current budgeted amounts.

General Fund	1.4%
API	100%
E-Rate	100%

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<b>Total Funds 2002-2007</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	178,128	178,128
<b>2000-2999</b>				
Classified Personnel Salaries	0	0	0	0
<b>3000-3999</b>				
Employee Benefits	0	0	35,800	35,800
<b>4000-4999</b>				
Books and Supplies	0	0	9,985	9,985
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	39,897	39,897
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>				
Capital Outlay	34,000	143,710	117,124	294,834
<b>Total Funds</b>	<b>34,000</b>	<b>143,710</b>	<b>380,934</b>	<b>558,644</b>

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Line Item Category	Budget Narrative Description
1000-1999 Certificated Personnel Salaries	One certificated computer teacher is funded at the Lakeside School campus. One certificated stipend teacher is funded at the Suburu campus.
2000-2999 Classified Personnel Salaries	
4000-4999 Books and Supplies	Software is purchased to support the instructional program as determined by needs assessments, curriculum embedded assessments, and analysis of data from the SAT9 test and other norm-referenced tests.
5000-5999 Services and Other Operating Expenditures	Contracted individuals are hired to provide professional development as determined by the needs surveys.
6000-6999 Capital Outlay	Hardware and infrastructure items, including equipment replacement and/or upgrades are purchased as needed by the plan.

**Identify the Current Budget for Implementing Each Component**

- The District utilizes specific SACS codes to monitor technology-related purchases.
- General funds are expended for the purpose of hiring personnel and purchasing software, hardware, and infrastructure needs.
- API funds are used to purchase computers for both libraries, an Alpha Smart program and wireless networking for the Suburu campus.
- E-rate grants are used to reduce costs for phone-service, and Internet connectivity.
- Lakeside Electrical panel upgrades funded through Prop. 47 School Facilities Act(\$143,710)
- Lakeside Project Scope One to be funded though general funds
- Lakeside Project Scope Two and Three to be funded through API funds(\$34,000), E-Rate discounts (Approx. \$22,000 annually), EETT grant (projected \$ 2,983 annually)
- Lakeside Project Scope Four and Five to be funded through API awards, General Funds, EETT Grants, E-Rate discounts, & future funding resources.
- Lakeside Project Scope Four and Five budgets to be determined based on availability of future funding.
- Professional Development to be funded though General Funds and Future Grant Awards

Current budget for this technology plan primary exists through our General Funds, API Awards, and E-rate discounts. Additional funding such as future grant awards will be

necessary to fully budget all areas of our Technology plan. All budgets will also be contingent on future funding to our General Funds as awarded by the state.

**Identify Potential Methods for Reducing Costs**

- Long-term contracts will be considered to reduce the cost of on-going purchases.
- E-rate will be used to continue reducing costs for phone services; Internet connectivity; hardware, such as cabling, switches, servers, routers and internal ISP lines connections.
- Piggyback purchasing programs will be pursued to provide lower cost purchasing opportunities.
- Standardization of operations systems is in place and this policy will continue.
- District licenses are purchased to decrease costs for the implementation of software.
- C-SMAR, CalNet, and C-MAS are currently being used by the district to strengthen buying power and reduce costs.
- Local industry experts and non-profit organizations will be contacted and invited to become partners with Lakeside Union School District's technology efforts.
- Potential purchases will be discussed in newsletters and at School Site Council meetings to encourage parent/community donations.
- The District will effectively integrate technology training into existing professional development training activities using low-cost resources identified in the Professional Development component of this Plan.
- The District will utilize the expertise of staff Tech Mentor(s) to provide training and technical assistance.
- District will utilize programs to pursue opportunities to acquire needed hardware at discounted prices or donation such as Computers for Learning (CFL)
- Continue to partner with local businesses offering donations of hardware

***D2. Goals***

Develop and Implement Annual Budgets for the Term of the Plan - 5 Years

1. Actively pursue and acquire funding in the forms of grants to help in implementing current Technology Plan.
2. The district will employ individuals to provide professional development as determined by the CTAP<sup>2</sup> survey.
3. Improvements in infrastructure to provide Ethernet wiring to all classrooms.
4. Increase District computer to student ratios.
5. Purchase of software, hardware, and infrastructure, as determined by needs assessment results.
6. Standards-based tutorial programs for students throughout the District.
7. Ongoing maintenance of District Web site.
8. Explore video broadcasting capabilities.
9. Expand the use of technology in core subject areas in grades K-8.
10. Expand the use of presentation software in content areas for grades K-8.
11. Expand the use of presentation equipment throughout the District.

12. Workstations to be continually upgraded.
13. Subscribe to periodicals and educational sites.

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<b>Budget Year 1(2003-2004)</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	43,652	43,652
<b>2000-2999</b>				
Classified Personnel Salaries		0	0	0
<b>3000-3999</b>				
Employee Benefits		0	8,817	8,817
<b>4000-4999</b>				
Books and Supplies		0	2,485	2,485
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	15,897	15,897
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>				
Capital Outlay	0	143,710	53,921	197,631
<b>Total Funds</b>	0	143,710	124,772	<b>268,482</b>

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<b>Budget Year 2 (2004-2005)</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	44,089	44,089
<b>2000-2999</b>				
Classified Personnel Salaries		0	0	0
<b>3000-3999</b>				
Employee Benefits		0	8,905	8,905
<b>4000-4999</b>				
Books and Supplies		0	2,500	2,500
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	6,000	6,000
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>	34,000	0	10,000	44,000
Capital Outlay				
<b>Total Funds</b>	<b>34,000</b>	<b>0</b>	<b>71,494</b>	<b>105,494</b>

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<b>Budget Year 3 (2005-2006)</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	45,412	45,412
<b>2000-2999</b>				
Classified Personnel Salaries		0	0	0
<b>3000-3999</b>				
Employee Benefits		0	8,994	8,994
<b>4000-4999</b>				
Books and Supplies		0	2,500	2,500
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	6,000	6,000
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>				
Capital Outlay	0	0	26,528	26,528
<b>Total Funds</b>	<b>0</b>	<b>0</b>	<b>89,434</b>	<b>89,434</b>

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<b>Budget Year 4</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	44,975	44,975
<b>2000-2999</b>				
Classified Personnel Salaries		0	0	0
<b>3000-3999</b>				
Employee Benefits		0	9,084	9,084
<b>4000-4999</b>				
Books and Supplies		0	2,500	2,500
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	6,000	6,000
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>				
Capital Outlay	0	0	16,725	16,725
<b>Total Funds</b>	<b>0</b>	<b>0</b>	<b>79,284</b>	<b>79,284</b>

<b>Budget Year 5</b>				
<b>Major Object of Expenditure</b>	<b>Categorical Funds</b>	<b>Specific Grant Funds (Add multiple columns if receiving multiple grants)</b>	<b>School District General Fund</b>	<b>Total Funds by Object of Expenditure</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(a + b + c)</b>
<b>1000-1999</b>				
Certificated Personnel Salaries	0	0	45,425	45,425
<b>2000-2999</b>				
Classified Personnel Salaries		0	0	0
<b>3000-3999</b>				
Employee Benefits		0	9,175	9,175
<b>4000-4999</b>				
Books and Supplies		0	2,500	2,500
<b>5000-5999</b>				
Services and Other Operating Expenditures	0	0	6,000	6,000
<b>Indirect Costs at an Established Rate (excluding the 6000-6999 category)</b>	0	0	0	0
<b>6000-6999</b>				
Capital Outlay	0	0	10,000	10,000
<b>Total Funds</b>	<b>0</b>	<b>0</b>	<b>73,100</b>	<b>73,100</b>

**Provide for Ongoing Technical Support**

- The district will maintain its current level of technical support.
- The district will look to purchase warranties on new hardware and software purchases to reduced maintenance costs.
- Total Cost of Ownership considerations will be estimated prior to the purchase of new hardware
- As network infrastructures continue to grow and improve adjustments will be made to continue to contract out services needed to maintain networks.

**Plan for the Obsolescence of Equipment**

- Non-serviceable equipment will be sold at auction.
- A technology replacement cycle will be maintained and evaluated annually to assure a systematic method of renewal.

**E. Monitoring and Evaluation**

***E1. Needs and Resource Assessment***

**Review the Implementation Monitoring Processes for each Component**

The goals of this plan are to ensure that technology is effectively enhancing the learning environment for all of our students and to solidify the needs of our District to make needed improvements in our infrastructure and professional development opportunities that align with current curricular goals.

It is important for the Technology Committee to oversee and monitor each component of this plan to see that each area compliments each other. As improvements in our infrastructure are developed, necessary professional development trainings are needed to guarantee that effective use of new hardware and electronic resources are meeting our curricular goals. Efficacy of this plan will be monitored through monthly meetings of the Technology Committee.

**Evaluating Impact of Technology on Student Learning**

Several methods will be used to determine the impact of technology in student learning in our District. Annual test scores from the STAR with norm – referenced and criterion – referenced items will be used for analysis. Additional achievement data will also be examined to monitor whole group and significant subgroup populations. Annual CTAP<sup>2</sup>, teacher, parent and student surveys will also be analyzed to determine progress and impact of technology on student learning. Other indicators such as attendance, discipline and graduation rates will also be charted and used for evaluation.

**Monitoring and Evaluation Tools Provided at Little or No Cost**

- [California Technology Assistance Project\(CTAP<sup>2</sup>\)](#) online assessment and survey profile stores individual and group data annually.
- Online resource tools and templates can be found at [Technology Information Center for Administrative Leadership\(TICAL\)](#)
- Partnerships with local colleges and universities.

**Schedule for Evaluating the Effect Plan of Implementation**

Start Date	Projected Completion	Actual Completion	Activity or Benchmark	Target Audience	Person Responsible
June 2003	Annually through June 2008		Annual CTAP <sup>2</sup> Assessment & Survey	Administrators and Teachers	Administrators and Teachers  Technology Committee
September 2003	Annually through June 2008		Annually collect student data (STAR,	All K-8 students	Technology Committee

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			assessment data, discipline rates, attendance, ect.)		
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**How and When will Results of Monitoring and Evaluation Process be used**

Evaluation data will be used in the monitoring of our existing plan on an ongoing basis to make necessary adjustments. Results will be communicated through various resources, including:

- Staff meetings
- District and school site newsletters
- Website postings
- Parent meetings

**Existing Partnerships**

Type of Partner	Partner name	Role in Development of Technology Plan	Role in Supporting the Project
Parents	Lakeside Booster Club	None	Survey assistance, communication, incentives
	School Site Council	Input	Communication and Purchase of Hardware & Software
Students	Student Council	Input	Survey assistance
Businesses	CompuHelp Computer Services	Input	Technical support
	Occidental Petroleum Corporation	None	Donation of discarded equipment
	Infinity Communications	Input	E-Rate Consultation
	Advance Communications	Input	Possible Network Installation services
	Paveltich Electrical	Input	Possible Network Installation services
	Contra Costa	Input	Possible Network Installation services
Government Agencies	Kern County Superintendent of Schools	Technology Plan training, Technical advise, and consultation	Trainings and Ongoing consultation

**Management**

Individual Responsible or Job Title	Responsibilities	Time Estimate (hours per month or number of full
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		<b>time staff)</b>
District Superintendent and Technology Committee	Provide overall management and Coordination of Technology Implementation Plan.	4 hrs per month
District Superintendent and Technology Committee	Encourage and solicit ongoing partner involvement.	4 hrs per month
District Superintendent and Technology Committee	Facilitate and manage staff development.	4 hrs per month
District Superintendent and Technology Committee	Collect and interpret data collection.	4 hrs per month
District Superintendent and Technology Committee	Manage and coordinate hardware acquisition and installation.	4 hrs per month
District Superintendent and Technology Committee	Collect and interpret data on staff development and technology proficiencies.	4 hrs per month

**E. Effective Collaborative Strategies with Adult Literacy Providers to Maximize the Use of Technology Criterion**

At this time Lakeside Union School District does not partner with any Adult Literacy Providers. There is a need to pursue funding and develop a program, which our District can use to offer Adult Literacy classes to the parents of our students and members of our Community.

**F. Effective, Researched Based Methods, Stategies, and Criteria**

**Technology Strategies, Methods for Student Learning and Technology Management**

Research indicates that technology’s impact on teaching and learning is a function of the extent in which it is systematically incorporated into instructional planning. As indicated in the Curriculum and Professional Development implementation sections of this plan, our District is committed to creating collaborative lessons, which integrate technology into our content standards. *“Alignment of project or lesson content with state content standards is an important first step to infusing technology with curricula” (Caret)* It is based on this research that the first steps of our plan is to create activities and curricula that align with state content standards.

Research also indicates that technology skills can help increase student learning, develop successful problem solving tools and prepare them for the workforce. *“Technology can foster an increase in the quantity and quality of students thinking and writing” (Caret)*. As indicated in the Curriculum section of this technology plan currently all students are given access to our computer labs. Every Language Arts Teacher weekly utilizes the schools’ computer lab. Students are presented with various activities and projects, which

utilize available technologies to enhance and challenge their already rigorous academic state content standards.

Current use of technology includes the use of computer adaptive tests (CATs). This is detailed in the Curriculum section of this plan under Current Use of Hardware section. Research indicates that CATs can be used to provide valuable assessments of students learning and progress. Advantages of CATs include:

- *“Compared to paper-and-pencil tests, CAT technology requires fewer test items to arrive at a more accurate estimate of test takers' proficiency.*
- *CAT scoring allows for finer distinctions than total number correct.*
- *CAT scoring takes into account not just the number of items answered correctly, but which items were answered correctly. A test taker who correctly answers a more difficult set of questions will score higher than a test taker who correctly answers an easier set of questions.*
- *The time required to take a CAT is shorter, since test items outside the test taker's proficiency level are excluded.*
- *The test taker is continuously faced with a realistic challenge--items are not too difficult or too easy.*
- *Because each test taker is potentially administered a different set of test items, test security is enhanced.*
- *CAT technology allows test takers to receive immediate feedback on their performance.*
- *For tests administered on a large scale, scheduling and supervision concerns are greatly reduced because individual administration is possible.” (Center for Advanced Research on Language Acquisition at the University of Minnesota, 1999)*

Based on this research and successful results from our current use, CATs, will continue to be utilized in assessing student achievement, tracking individual students, and specific target groups in ways that effectively monitor our educational programs.

### **Education Technology Models and Strategies**

Research indicates that teachers need time to plan, learn and implement technology applications. Successful programs found time for teachers to plan and collaborate ideas and lessons. (Roschelle 2000) Our Curriculum and Professional Developments components of this plan outline the importance of regular meetings used to assist in planning and sharing.

A minimum of one networked computer workstation in every classroom in our District is outlined in the goals and implementation of the Infrastructure component in this plan. Case studies showed that teachers were more willing to try and learn technology skills and lessons when technology was readily and easily accessible to them. Providing a minimum of one teacher workstation with Internet access is considered an important component of our implementation plan. As teachers learn new skills and innovative methods of lesson delivery, those skills will be used to foster student learning and growth. (Becker, H.J. (1998))

### **Innovative strategies for using technology to deliver rigorous academic courses, curricula, and distant learning technologies**

Grade level and subject area bi-monthly meetings as discussed in the Professional Development and Curriculum sections in this plan will be a used to develop and utilize

technology strategies that deliver academic content beyond the normal classroom setting. As network infrastructure improvements are made and technology resources become more readily available in our classrooms our staff will be prepared to deliver more rigorous academic courses and curricula such as distant learning opportunities for our students. The development of our district web site in the Implementation section of the Curriculum and Infrastructure components of this plan illustrate this District process.

## E. Reference

Becker, H.J. (1998) *Internet use by teachers* (report No1). Irvine, CA: Teaching, Learning, & Computing. Retrieved December 1, 2003, from <<http://www.crito.uci.edu/TLC/FINDINGS/internet-use/startpage.htm>>.

*Caret: Center for Applied Research in Educational Technology*. International Society for Technology in Education. Retrieved December 1, 2003 from <<http://caret.iste.org/index.cfm>>.

Center for Advanced Research on Language Acquisition. (1999). *Frequently asked questions about computer adaptive tests*. Minneapolis, MN: University of Minnesota. Retrieved December 1, 2002, from <<http://carla.acad.umn.edu/CATFAQ.html>>.

Roschelle, J. M., Pea, R. D., Hoadley, C. M., Gordin, D. N., & Means, B. M. (2000). Changing how and what children learn in school with computer-based technology. *Children and Computer Technology*, 10(2), 76–101. Retrieved Dec 1, 2003, from <[http://www.futureofchildren.org/pubs-info2825/pubs-info.htm?doc\\_id=69787](http://www.futureofchildren.org/pubs-info2825/pubs-info.htm?doc_id=69787)>.

Appendix A:  
Lakeside School  
Network Project  
CAT5E

## Appendix A: Lakeside School Network Project CAT5E and Fiber Optic Cabling

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### I. Scope One

- A. **Install** a 12-strand Multimode optical fiber backbone from the Main Cross-connect (MC) to the District Office.
1. Install an outdoor-rated 12-strand 62.5  $\mu\text{m}$  Multimode cable.
  2. Install through existing underground conduit pathways.
  3. Terminate all strands with SC-style connectors.
  4. Provide and install a 72-port fiber rack mount unit in the MC.
  5. Provide and install a 24-port fiber rack mount unit in the District Office.
- B. **Install** a wall mount cabinet in the District Office to create a new Horizontal Cross-connect (HC).
1. Install a painted 4' x 4' painted backboard in the desired location.
  2. Install a 24"x 19"x 24" black, double-hinged enclosure with a plexiglass front door.
  3. Provide and install horizontal wire management as required to organize patching cables.
- C. **Install** CAT5e drop locations in the District Office as specified on the supplied drawings.
1. Install four, dual drop locations in the new office area.
  2. Label, terminate, and test in accordance with industry standards.

### II. Scope Two

- A. **Install** a 12-strand Multimode optical fiber backbone from Room 111 to the MC.
1. Install a 12-strand tight-buffered 62.5  $\mu\text{m}$  Multimode cable for the HC backbone.
  2. Terminate all strands with SC-style connectors.
  3. Provide and install a 24-port fiber rack mount unit in HC111.
- B. **Install** a wall mount cabinet in Room 111 to create a new Horizontal Cross-connect (HC).
1. Install a painted 4' x 4' painted backboard in the desired location.
  2. Install a 48"x 19"x 24" black, double-hinged enclosure with a plexiglass front door.
  3. Provide and install horizontal wire management as required to organize patching cables.
- C. **Install** CAT5e drop locations as indicated on the supplied drawing.
1. Install two CAT5e data cables to 27 locations.
  2. Install four CAT5e data cables to 18 locations.
  3. Install six CAT5e data cables to one location.
  4. Label, terminate, and test in accordance with industry standards.
  5. Provide and install three 48-port patch panels for CAT5e terminations.
- D. **Create** a new HC in the existing Computer Lab.
1. Re-terminate and certify 33 CAT5e data cables.
    - a. Label all cable ends to meet industry standards.
    - b. Label patch panels to match cable termination.
  2. Install a six-strand 62.5  $\mu\text{m}$  Multimode cable from the Computer Lab to the MC for a backbone connection.
    - a. Terminate all strands with SC-style connectors.
    - b. Provide and install a 24-port fiber rack mount unit in HCCL existing rack.

**Appendix A:  
Lakeside School Network Project  
CAT5E and Fiber Optic Cabling**

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**III. Scope Three**

- A. **Install** a six-strand 62.5  $\mu\text{m}$  Multimode cable from the Portables to the MC for a backbone connection.
1. Terminate all strands with SC-style connectors.
  2. Provide and install a 24-port fiber rack mount unit.
  3. Install through existing underground conduit pathways.
- B. **Install** a wall mount cabinet in Room 901 to create a new Horizontal Cross-connect (HC).
1. Install a painted 4' x 4' painted backboard in the desired location.
  2. Install a 24"x 19"x 24" black, double-hinged enclosure with a plexiglass front door.
  3. Provide and install horizontal wire management as required to organize patching cables.
- C. **Install** CAT5e drop locations as indicated on the supplied drawing.
1. Install six CAT5e data cables to one location.
  2. Provide and install surface mount raceway for cable pathways.
  3. Label, terminate, and test in accordance with industry standards.
  4. Provide and install one 48-port patch panel for CAT5e terminations.

**IV. Scope Four**

- A. **Install** a wall mount cabinet in the MOT office to create a new Horizontal Cross-connect (HC).
1. Install a painted 4' x 4' painted backboard in the desired location.
  2. Install a 24"x 19"x 24" black, double-hinged enclosure with a plexiglass front door.
  3. Provide and install horizontal wire management as required to organize patching cables.
- B. **Install** a six-strand 62.5  $\mu\text{m}$  Multimode cable from the MOT office to the MC for a backbone connection.
1. Terminate all strands with SC-style connectors.
  2. Provide and install a 24-port fiber rack mount unit.
- C. **Install** two-2" PVC Schedule 40 underground conduits from the MOT office to the Band Building.
1. Trench and install two-2" PVC conduits with a minimum coverage of 18" below finished grade (BFG).
  2. Extend the PVC conduit above ground with EMT risers into a 12"x 12"x 6" NEMA 3 junction box.
  3. Provide two penetrations through the junction box into the corresponding building attic space.
  4. Return the landscaping to pre-construction condition.
- D. **Install** two-2" PVC Schedule 40 underground conduits from the MOT office to Room 202.
1. Trench and install two-2" PVC conduits with a minimum coverage of 18" BFG.
  2. Extend the PVC conduit above ground with EMT risers into a 12"x 12"x 6" NEMA 3 junction box.
  3. Provide two penetrations through the junction box into the corresponding building attic space.
  4. Return the landscaping to pre-construction condition.
- E. **Install** CAT5e outside plant cable (OSP) from the MOT to drop locations as indicated on the supplied drawing.
1. Install four CAT5e OSP data cables in four locations in the Kindergarten Building.
  2. Install two CAT5e OSP data cables in three locations in the Band building.
  3. Install surface mount raceway to provide an interior pathway for the cabling.
  4. Label, terminate, and test in accordance with industry standards.

**Appendix A:  
Lakeside School Network Project  
CAT5E and Fiber Optic Cabling**

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- F. **Install** CAT5e drop locations as indicated on the supplied drawing.
  - 1. Install two CAT5e data cables to one location.
  - 2. Provide and install surface mount raceway for cable pathways.
  - 3. Label, terminate, and test in accordance with industry standards.
  
- G. **Install** a CAT5e 48-port patch panel in the MOT HC for all data cable terminations.

**V. Scope Five**

- A. **Install** a wall mount cabinet in the storage room of the Pool Building to create a new Horizontal Cross-connect (HC).
  - 1. Install a painted 4' x 4' painted backboard in the desired location.
  - 2. Install a 24"x 19"x 24" black, double-hinged enclosure with a plexiglass front door.
  - 3. Provide and install horizontal wire management as required to organize patching cables.
  
- B. **Install** CAT5e drop locations as indicated on the supplied drawing.
  - 1. Install two CAT5e data cables to one location.
  - 2. Install four CAT5e data cables to one location.
  - 3. Install two CAT5e data cables to six locations for the Library.
  - 4. Install one CAT5e data cable for two locations.
  - 5. Provide and install surface mount raceway for cable pathways.
  - 6. Label, terminate, and test in accordance with industry standards
  
- C. **Install** a six-strand 62.5  $\mu$ m Multimode cable from the storage room to the MC for a backbone connection.
  - 1. Terminate all strands with SC-style connectors.
  - 2. Provide and install a 24-port fiber rack mount unit.
  
- D. **Install** a CAT5e 48-port patch panel in the MOT HC for all data cable terminations.
  
- E. **Install** CAT5e outside plant cable (OSP) from the MOT to drop locations as indicated on the supplied drawing.
  - 1. Install two CAT5e OSP cables from the Gym to the District Office.
  
  - 2. Provide and install surface mount raceway for cable pathways.
  - 3. Label, terminate, and test in accordance with industry standards.
  
- F. **Install** CAT5e drop locations from the Auditorium to the MC.
  - 1. Install two CAT5e data cables to one location.
  - 2. Provide and install surface mount raceway for cable pathways.
  - 3. Label, terminate, and test in accordance with industry standards.

**Appendix A:  
Lakeside School Network Project  
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**VI. Estimated Costs per Scope**

<b>Scope One:</b>	<b>\$7,950.00</b>
<b>Scope Two:</b>	<b>\$24,550.00</b>
<b>Scope Three:</b>	<b>\$5,890.00</b>
<b>Scope Four:</b>	<b>\$16,528.00</b>
<b>Scope Five:</b>	<b>\$6,725.00</b>

# Appendix C

## Enhancing Education Through Technology

### Formula Grant Program

*Appendix C - Enhancing Education Through Technology Formula Grant Program*

**Criteria for EETT-Funded Education Technology Plans**

*In order to be approved, an EETT-funded plan needs to have “Adequately Addressed” each of the following:*

**For corresponding EETT Requirements, see Appendix F**

<b>1. PLAN DURATION CRITERION</b>	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
a. The plan should guide the district’s use of education technology for the next 3-5 years.	1,7-9,12-13,18-20,23,27-31	The duration of the plan does not describe the education technology plan for the next 3-5 years.	The plan is less than 3 years or more than 5 years in length.

<b>2. STAKEHOLDERS CRITERION</b> Corresponding EETT Requirement(s): 7 & 11 (Appendix F).	<b>Page in District Plan</b>	<b>Adequately Addressed</b>	<b>Not Adequately Addressed</b>
a. Description of how a variety of stakeholders from within the school district and the community-at-large participated in the planning process.	2,33-34	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.

**Enhancing Education Through Technology Formula Grant Program**  
**Criteria for EETT Funded Education Technology Plans**

<b>3. CURRICULUM COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 1, 2, 3, 8, 10, & 12 (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a. Description of teachers' and students' current access to technology tools both during the school day and outside of school hours.</b>	3-5	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>b. Description of the district's current use of hardware and software to support teaching and learning.</b>	4-5	The plan describes the typical frequency and type of use (technology skills/information literacy/integrated into the curriculum).	The plan cites district policy regarding use of technology, but provides no information about its actual use.
<b>c. Summary of the district's curricular goals and academic content standards in various district and site comprehensive planning documents.</b>	5-6	The plan references other district documents that guide the curriculum and/or establish goals and standards.	The plan does not reference district curriculum goals.
<b>d. List of clear goals and a specific implementation plan for using technology to improve teaching and learning by supporting the district curricular goals and academic content standards.</b>	5-7	The plan delineates clear, specific and realistic goals and target groups for using technology to support the district's curriculum goals and academic content standards to improve learning. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
<b>e. List of clear goals and a specific implementation plan as to how and when students will acquire technology and information literacy skills needed to succeed in the classroom and the workplace.</b>	6-9	For the focus areas, the plan delineates clear, specific and realistic goals for using technology to help students acquire technology and information literacy skills. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to determine what action needs to be taken to accomplish the goals.

**Enhancing Education Through Technology Formula Grant Program  
Criteria for EETT District Education Technology Plans**

<b>3. CURRICULUM COMPONENT CRITERIA-Continued</b>	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>f. List of clear goals and a specific implementation plan for programs and methods of utilizing technology that ensure appropriate access to all students.</b>	6-9	For the focus areas, the plan delineates clear, specific and realistic goals for using technology to support the progress of all students. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
<b>g. List of clear goals and a specific implementation plan to utilize technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs.</b>	6-9	The plan delineates clear, specific and realistic goals for using technology to support the district's student record-keeping and assessment efforts. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
<b>h. List of clear goals and a specific implementation plan to utilize technology to make teachers and administrators more accessible to parents.</b>	6-7	The plan delineates clear, specific and realistic goals for using technology to facilitate improved two-way communication between home and school. The implementation plan clearly supports accomplishing the goals.	The plan suggests how technology will be used, but is not specific enough to know what action needs to be taken to accomplish the goals.
<b>i. List of benchmarks and a timeline for implementing planned strategies and activities.</b>	7-9	The benchmarks and timeline are specific and realistic. Teachers, administrators and students implementing the plan can easily discern what steps will be taken, by whom, and when.	The benchmarks and timeline are either absent or so vague that it would be difficult to determine what should occur at any particular time.
<b>j. Description of the process that will be used to monitor whether the strategies and methodologies utilizing technology are being implemented according to the benchmarks and timeline.</b>	9	The monitoring process is described in sufficient detail so that who is responsible, and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.

**Enhancing Education Through Technology Formula Grant Program  
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<b>4. PROFESSIONAL DEVELOPMENT COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 5 & 12 (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a. Summary of the teachers' and administrators' current technology skills and needs for professional development.</b>	9-11	The plan provides a clear summary of the teachers' and administrators' current technology skills and needs for professional development. The findings are summarized in the plan by discrete skills in order to facilitate providing professional development that meets the identified needs and plan goals.	Description of current level of staff expertise is too general or relates only to a limited segment of the district's teachers and administrators in the focus areas or does not relate to the focus areas, i.e. only the fourth grade teachers when grades 4-8 are the focus grade levels.
<b>b. List of clear goals and a specific implementation plan for providing professional development opportunities based on the needs assessment and the Curriculum Component goals, benchmarks, and timeline.</b>	11-12	The plan delineates clear, specific and realistic goals for providing teachers and administrators with sustained, ongoing professional development necessary to implement the Curriculum Component of the plan. The implementation plan will clearly supports accomplishing the goals.	The plan speaks only generally of professional development and is not specific enough to ensure that teachers and administrators will have the necessary training to implement the Curriculum Component.
<b>c. List of benchmarks and a timeline for implementing planned strategies and activities.</b>	12-13	The benchmarks and timeline are specific and realistic. Teachers and administrators implementing the plan can easily discern what steps will be taken, by whom, and when.	The benchmarks and timeline are either absent or so vague that it would be difficult to determine what steps will be taken, by whom, and when.
<b>d. Description of the process that will be used to monitor whether the professional development goals are being met and whether the planned professional development activities are being implemented in accordance with the benchmarks and timeline.</b>	13	The monitoring process is described in sufficient detail so that who is responsible and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.

**Enhancing Education Through Technology Formula Grant Program  
Criteria for EETT Funded Education Technology Plans**

<b>5. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 6 & 12 (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a. Describe the technology hardware, electronic learning resources, networking and telecommunication infrastructure, physical plant modifications, and technical support needed by the district’s teachers, students, and administrators to support the activities in the Curriculum and Professional Development Components of the plan.</b>	13-17	The plan clearly summarizes the technology hardware, electronic learning resources, networking and telecommunication infrastructure, physical plant modifications, and technical support proposed to support the implementation of the district’s Curriculum and Professional Development Components. The plan also includes the list of items to be acquired, which may be included as an appendix.	The plan includes a description or list of hardware, infrastructure and other technology necessary to implement the plan, but there doesn’t seem to be any real relationship between the activities in the Curriculum and Professional Development Components and the listed equipment. Future technical support needs have not been addressed or do not relate to the needs of the Curriculum and Professional Development Components.
<b>b. Describe the existing hardware, Internet access, electronic learning resources, and technical support already in the district that could be used to support the Curriculum and Professional Development Components of the plan.</b>	13-17	The plan clearly summarizes the existing technology hardware, electronic learning resources, networking and telecommunication infrastructure, and technical support to support the implementation of the Curriculum and Professional Development Components. The current level of technical support is clearly explained.	The inventory of equipment is so general that it is difficult to determine what must be acquired to implement the Curriculum and Professional Development Components. The summary of current technical support is missing or lacks sufficient detail.
<b>c. List of clear benchmarks and a timeline for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components.</b>	18-20 37-41	The benchmarks and timeline are specific and realistic. Teachers and administrators implementing the plan can easily discern what needs to be acquired or repurposed, by whom, and when.	The benchmarks and timeline are either absent or so vague that it would be difficult to determine what needs to be acquired or repurposed, by whom, and when.
<b>d. Description of the process that will be used to monitor whether the goals and benchmarks are being reached within the specified time frame.</b>	21	The monitoring process is described in sufficient detail so that who is responsible and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.

**Enhancing Education Through Technology Formula Grant Program  
Criteria for EETT Funded Education Technology Plans**

<b>6. FUNDING AND BUDGET COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 7 & 13, (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a. List of established and potential funding sources and cost savings, present and future.</b>	22,25	The plan clearly describes resources* that are available or could be obtained to implement the plan. The process for identifying future funding sources is described.	Resources to implement the plan are not identified or are so general as to be useless.
<b>b. Estimate implementation costs for the term of the plan (3-5 years).</b>	23,24	Cost estimates are reasonable and address the total cost of ownership.	Cost estimates are unrealistic, lacking, or are not sufficiently detailed to determine if the total cost of ownership is addressed.
<b>c. Description of the level of ongoing technical support the district will provide.</b>	16-17, 31	The plan describes the level of technical support that will be provided for implementation given current resources and describes goals for additional technical support should new resources become available. The level of technical support is based on some logical unit of measure.	The description of the ongoing level of technical support is either vague or not included; is so inadequate that successful implementation of the plan is unlikely, or is so unrealistic as to raise questions of the viability of sustaining that level of support.
<b>d. Description of the district’s replacement policy for obsolete equipment.</b>	31	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.
<b>e. Description of the feedback loop used to monitor progress and update funding and budget decisions.</b>	32-33	The monitoring process is described in sufficient detail so that who is responsible, and what is expected is clear.	The monitoring process is either absent, or lacks detail regarding who is responsible and what is expected.

\* In this document, the term “resources” means funding, in-kind services, donations, or other items of value.

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<b>7. MONITORING AND EVALUATION COMPONENT CRITERIA</b> Corresponding EETT Requirement(s): 11 (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Example of Not Adequately Addressed</b>
<b>a. Description of how technology’s impact on student learning and attainment of the district’s curricular goals, as well as classroom and school management, will be evaluated.</b>	32	The plan describes the process for evaluation utilizing the goals and benchmarks of each component as the indicators of success.	No provision for an evaluation is included in the plan. How success is determined is not defined. The evaluation is defined, but the process to conduct the evaluation is missing.
<b>b. Schedule for evaluating the effect of plan implementation.</b>	32-33	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.
<b>c. Description of how the information obtained through the monitoring and evaluation will be used.</b>	33	The plan describes a process to report the monitoring and evaluation results to persons responsible for implementing and modifying the plan, as well as the plan stakeholders.	The plan does not provide a process for using the monitoring and evaluation results to improve the plan and/or disseminate the findings.

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<p><b>8. EFFECTIVE COLLABORATIVE STRATEGIES WITH ADULT LITERACY PROVIDERS TO MAXIMIZE THE USE OF TECHNOLOGY CRITERION</b> Corresponding EETT Requirement(s): 11 (Appendix F).</p>	<p><b>Page in District Plan</b></p>	<p><b>Example of Adequately Addressed</b></p>	<p><b>Example of Not Adequately Addressed</b></p>
<p><b>a. If the district has identified adult literacy providers, there is a description of how the program will be developed in collaboration with those providers.</b></p>	<p>34</p>	<p>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.</p>	<p>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.</p>

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<b>9. EFFECTIVE, RESEARCHED-BASED METHODS, STRATEGIES, AND CRITERIA</b> Corresponding EETT Requirement(s): 4 & 9 (Appendix F).	<b>Page in District Plan</b>	<b>Example of Adequately Addressed</b>	<b>Not Adequately Addressed</b>
<b>a. Description of how education technology strategies and proven methods for student learning, teaching, and technology management are based on relevant research and effective practices.</b>	34-35	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>b. Description of thorough and thoughtful examination of externally or locally developed education technology models and strategies.</b>	35	The plan describes references to research literature that supports why or how the model improves student achievement.	No research is cited.
<b>c. Description of development and utilization of innovative strategies for using technology to deliver rigorous academic courses and curricula, including distance learning technologies (particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources).</b>	35-36	The plan describes the process for development and utilization of strategies to use technology to deliver specialized or rigorous academic courses and curricula, including distance learning.	There is no plan to utilize technology to extend or supplement the district’s curriculum offerings