

# CLARK COUNTY SCHOOL DISTRICT



EXPLORE KNOWLEDGE ACADEMY CHARTER SCHOOL  
4801 S. Sandhill Rd., Las Vegas, NV 89121  
1711 Whitney Mesa Dr., Henderson, NV 89014  
4845 Community Lane, Las Vegas, NV 89121

School Technology Plan  
For the 2006-2007 Academic Year

**ACKNOWLEDGEMENTS**

Members of the Technology Support Team and Title:

<b>NAME</b>	<b>TITLE</b>
Joan P. Sando	Executive Director
Marlo Tsuchiyama	Director of Finance and Technology
Constance Ewing	Director Ed Services, Secondary
David Price	Director Ed Services, Elementary
Danette Green	Director of Operations and Records- SASI
Nate Bolton	Network Administrator
Janet Nowlin	Advisor-Whitney Mesa Location
Karen Long	Advisor-Sandhill Location
Amy MacDonald	Advisor-Community Location
Chase Foley	Student Representative
Thomas Brudlo, Dawn Perkins	Parent Representatives
Jason Sando, Rachelle Faherty	Technology Community Representatives

## **TABLE OF CONTENTS**

ACKNOWLEDGEMENTS .....	ii
TABLE OF CONTENTS .....	iii
SECTION I: INTRODUCTION .....	1
SECTION II: VISION AND/OR MISSION STATEMENTS .....	2
SECTION III: COMPREHENSIVE NEEDS ASSESSMENT .....	3
SECTION IV: GOALS, ACTION STEPS AND MONITORING PLAN .....	5
SECTION IV-A: Curriculum Goals, Action Steps and Monitoring Plan .....	5
SECTION IV-B: Professional Development Goals, Action Steps and Monitoring Plan .....	7
SECTION IV-C: Infrastructure Goals, Action Steps and Monitoring Plan .....	9
SECTION IV-D: Upgrade and Replacement Goals, Action Steps and Monitoring Plan .....	12
SECTION V: SCHOOL DATA SUMMARY .....	14
SECTION VI: COMMUNITY INVOLVEMENT .....	15
SECTION VII: IMPLEMENTATION OF STATE GUIDELINES .....	16
SECTION VII-A: Level I (Low Tech).....	16
SECTION VII-B: Level II (Mid Tech) .....	17
SECTION VII-C: Level III (High Tech).....	18
SECTION VIII: TECHNOLOGY PLAN EVALUATION OUTLINE.....	19

***SECTION I: INTRODUCTION***

**Explore Knowledge Charter School serves students in grades K-12 at three locations in Clark County. The Sandhill site serves grades 1-6 and has been in operation since 2003. The Whitney Mesa site serves grades 6-12 and Community Lane serves grades K-8. The latter two sites are in their first year of operation.**

**The Sandhill site has a computer lab with Internet access for 12 stations, one of which is connected to an overhead projector. Each classroom has three to four workstations with Internet connection. Sandhill is also where EKA's SASI server is currently located.**

**The Whitney Mesa site has eight computers in each class, with plans to develop a computer lab. The Community Lane site has 12 computers in one room plus 12 workstations throughout the other classrooms.**

**Explore Knowledge Academy Charter School continually strives to provide every student with the best possible education, preparing all students to function effectively in the society in which they live. Therefore, we believe all students in Explore Knowledge Academy Charter School must develop competencies in using and applying a broad range of technologies to support lifelong learning.**

## **SECTION II: VISION AND/OR MISSION STATEMENTS**

### **District Vision and/or Mission Statement**

Clark County School District students will have the knowledge, skills, attitudes, and ethics necessary to succeed academically and will practice responsible citizenship.

### **Region Vision and/or Mission Statement**

### **School Vision and/or Mission Statement**

The Explore Knowledge Academy Charter School will prepare all students for college, work, and citizenship.

### **School Technology Vision and/or Mission Statement**

Elementary students will learn *how to use* technology for learning and secondary students will *use* technology for learning on a daily basis.

Explore Knowledge Academy's vision is to aid its students in becoming skilled, knowledgeable, independent, and self-directed learners who are comfortable with and proficient in using technology in all its forms as information resources. Through the use of technology, with its varied aspects and applications, each student at Explore Knowledge Academy will be afforded opportunities and challenges that will allow them to successfully engage the future.

### **SECTION III: COMPREHENSIVE NEEDS ASSESSMENT**

#### **Curriculum Concerns**

- Students need multiple resources for individualized, project based learning.
- Students at all grade levels need to improve on skills and concepts in mathematics.
- Secondary students need training in the use of Project Foundry.
  - High School students need to prepare for NHSPEs.
  - Students need access to simulations for science lab activities.

#### **Professional Development Concerns**

- Project Foundry training
- NWEA training
  - Linux training
  - Open Office Training
  - Internet search, ekacademy.org, and web access training
  - Internet communication training and development (i.e.: email, IM, etc.) for staff communication as well as staff to parent communication
  - Multimedia tools instruction
  - Ongoing technology integration training

#### **Infrastructure Concerns**

- Servers to accommodate extra student computers (20:1)
- Sensitive electronic data (student and employee data, etc.) need to be secured in encrypted form to protect it in case of theft or loss.
- A process is needed to assure that user accounts are current to those currently enrolled or employed by the school to limit security risk.
- Current inventory of technology equipment and software.
- Work towards goal of 2 students per computer at Secondary level, and 5 students per computer at elementary level in classrooms.
  - Central library system that the three locations can access
  - Ability for Staff to access their work files from home
  - Ability for Students to access their class work files from home
  - Safe and adequate data and power distribution to allow for computers on the students' desks at Whitney Mesa.
  - Safe and adequate power distribution at Sandhill
  - Further development of the Secondary computer lab

**Upgrade and Replacement Concerns**

- Upgrade remote connectivity or move SASI to Whitney Mesa location
- Upgrade server and user data backup implementation
- Upgrade CRT's to LCD flat panel monitors to allow more work surface on the students' desks at secondary
  - Replace teacher desktops with a laptop
  - Replace digital cameras that have been lost
  - Upgrade existing 10/100 equipment to 10/100/1000.
  - Upgrade current bulky desktop computers to small form thin client computers
  - Upgrade aging laptops to newer laptops as needed

**SECTION IV: GOALS, ACTION STEPS AND MONITORING PLAN**

**SECTION IV-A: Curriculum Goals, Action Steps and Monitoring Plan**

Explore Knowledge Academy Charter School staff, in order to assist in improving student performance, will have access to curricular materials and resources that support the use of technology in teaching, learning, and instructional management.

**Strategies**

A.1. Integrate technology with state and district content standards to help attain high academic achievement.

A.2. Develop and implement school plans that integrate technology and curriculum and define measures for documenting success in raising student achievement levels.

A.3. Implement local curriculum based on state content standards for high academic achievement.

GOALS (IV-A: Curriculum)	ACTION STEPS	TIMELINE	ENTITY RESPONSIBLE
Establish a basic web resource system.	<ul style="list-style-type: none"> <li>o Advisors will compile a list of credible resources. (Research, curriculum (hands-on), tutorials &amp; productivity.</li> <li>o Network Administrator will help build a resource menu.</li> </ul>	Completed by end of March 2007	Advisors and Network Administrator
Students in all grade levels will improve on skills and concepts in mathematics.	<ul style="list-style-type: none"> <li>o Advisors will research math specific web resources and learning software.</li> <li>o Network Administrator will provide access to the resources or install particular software.</li> </ul>	Completed by end of March 2007	Advisors and Network Administrator

<b>GOALS (IV-A: Curriculum)</b>	<b>ACTION STEPS</b>	<b>TIMELINE</b>	<b>ENTITY RESPONSIBLE</b>
All Students in grade levels 5 <sup>th</sup> thru 12 <sup>th</sup> will use Project Foundry to track their projects.	<ul style="list-style-type: none"> <li>○ Students (5<sup>th</sup>-12<sup>th</sup> grade) will be trained to properly use Project Foundry for reporting and tracking projects.</li> <li>○ After being trained, the Students will use Project Foundry to track their Projects.</li> </ul>	Completed by end of February 2007	Committee Advisors and Site Administrators

**SECTION IV-B: Professional Development Goals, Action Steps and Monitoring Plan**

Explore Knowledge Academy Charter School educators will take advantage of opportunities for professional development in the use of technologies that will enhance teacher effectiveness, student achievement, and instructional management.

**Strategies**

B.1. Provide training and support strategies to ensure that the staff has the appropriate competencies and continuous support needed to use educational technology to deliver and support instruction.

B. 2. Provide opportunities for all staff to enhance their educational technology knowledge and skills.

B. 3. Provide educators with access to professional development in the use of educational technology in order to prepare them to help students meet high academic standards.

GOALS (IV-B: Prof. Devel.)	ACTION STEPS	TIMELINE	ENTITY RESPONSIBLE
Advisors that tech levels 5 <sup>th</sup> thru 12 <sup>th</sup> will use Project Foundry to track and grade their student’s projects.	<ul style="list-style-type: none"> <li>o Advisors will determine the credit system to be used in Project Foundry.</li> <li>o Advisors will be trained to use Project Foundry for student credits, project tracking and grading.</li> <li>o After being trained, the Advisors will start using Project Foundry to track and grade student projects.</li> </ul>	Completed by mid of January 2007 (During staff development week)	Advisors and Site Administrators
The NWEA testing process will be streamlined	<p>Using the experiences of the last testing session, the testing process will be made more efficient.</p> <ul style="list-style-type: none"> <li>o A meeting will be held in a computer lab where a mock</li> </ul>	Completed by the end of January 2007. Next NWEA is in mid February 2007	Network Administrator, Tech Committee Advisors and Site Administrators

GOALS (IV-B: Prof. Devel.)	ACTION STEPS	TIMELINE	ENTITY RESPONSIBLE
	session of testing will be held <ul style="list-style-type: none"> <li>o Proctors will be trained to assign the correct test to the correct student.</li> <li>o The testing schedule will be planned efficiently and one person will be chosen to be in charge of keeping the testing on schedule and retesting students who are absent on the day of their testing.</li> </ul>		

**SECTION IV-C: Infrastructure Goals, Action Steps and Monitoring Plan**

Discerning leaders at the school level will (a) choose technology policies and procedures that promote achievement by all students, including those with special needs, and (b) carefully monitor the effectiveness of technology use throughout the education system.

**Strategies**

- a) Develop a schedule for the technology infrastructure: maintenance, support, upgrading, expansion, and addition of new technologies.
- a) Develop an inventory of technology equipment in the school, updated yearly.
- b) Identify specific technologies that will need to be purchased.
- g) Use developed policies concerning ethical and legal issues such as acceptable use, copyright, security, confidentiality, and equity of access; monitor local procedures for adherence to these policies.

GOALS (IV-C: Infrastructure)	ACTION STEPS	TIMELINE	ENTITY RESPONSIBLE
There will be 1 LTSP server for every 20 terminal clients.	<ul style="list-style-type: none"> <li>o When the number of terminal clients per server at one location is greater than 20, a new terminal server order request shall be created.</li> <li>o Terminal specs shall include dual core processor, 10K HDD, and at least 2GB of high speed RAM.</li> </ul>	* This is an ongoing goal as we continue to add more computers into the classrooms and other learning environment.	Network Administrator
Sensitive electronic data (student and employee data, etc.) shall be secured in encrypted form to protect it in case of theft or loss.	<ul style="list-style-type: none"> <li>o All thumb drives, portable hard drives, or other means of transporting data will have an encrypted volume where all sensitive data will be kept at all times.</li> <li>o Laptops and desktop computers which contain sensitive data will have an encrypted volume where the</li> </ul>	Completed by the end of February 2007	Network Administrator

GOALS (IV-C: Infrastructure)	ACTION STEPS	TIMELINE	ENTITY RESPONSIBLE
	<p>sensitive data will be kept at all times.</p> <ul style="list-style-type: none"> <li>o Servers which hold sensitive data shall have that data stored in an encrypted volume at all times.</li> <li>o These encrypted volumes will be secured with a secure password at least 8 characters long containing at least 1 capital letter and at least one symbol.</li> <li>o Encryption volumes will be setup using Truecrypt or other suitable software.</li> </ul>		
<p>User accounts shall be current to those currently enrolled. Students who un-enroll shall have their accounts removed to limit security risk.</p>	<ul style="list-style-type: none"> <li>o Technology will meet with Registrar to create a procedure on notifying IT upon enrollment and withdrawal of a student.</li> <li>o Technology will also meet with Director of School Operations to create a procedure on notifying IT upon hiring and terminating of personnel.</li> </ul>	<p>Completed by the end of February 2007</p>	<p>Network Administrator, Director of School Operations, Registrar</p>
<p>There shall be a current and detailed inventory of technology equipment, including hardware and software.</p>	<ul style="list-style-type: none"> <li>o A physical inventory of hardware in all 3 locations will be done noting description of hardware, serial number, and if item was a donation. Software will also be inventoried with licensing information.</li> <li>o The inventory will be tracked in a spreadsheet and kept up to date of all technology equipment and software currently owned by EKA.</li> </ul>	<ul style="list-style-type: none"> <li>o Physical inventory of hardware and software will be done by mid January.</li> <li>o By mid February the spreadsheet will be utilized in a process that will track all of EKA's hardware and software.</li> </ul>	<p>Network Administrator and Director of Finance</p>

<b>GOALS (IV-C: Infrastructure)</b>	<b>ACTION STEPS</b>	<b>TIMELINE</b>	<b>ENTITY RESPONSIBLE</b>
Have in place the following ratio of equipment to facility:  1:2 networked computers per student at secondary  1:5 networked computers per student at elementary	<ul style="list-style-type: none"> <li>○ As budget allows add more terminal workstations (starting with the Secondary location).</li> </ul>	* This is an ongoing goal that may take us 2 to 3 years to fully attain.	Administration, Tech Committee Advisors, and Network Administrator

**SECTION IV-D: Upgrade and Replacement Goals, Action Steps and Monitoring Plan**

<b>GOALS (IV-D: Upgde. &amp; Rep.)</b>	<b>ACTION STEPS</b>	<b>TIMELINE</b>	<b>ENTITY RESPONSIBLE</b>
<p>Upgrade remote connectivity or move SASI to Whitney Mesa location.</p>	<ul style="list-style-type: none"> <li>○ Check with Embark on setting up frame relay at Whitney Mesa. If still not possible then...</li> <li>○ Get pricing on upgrading the remote connectivity at both Sandhill and Whitney Mesa. IF budget allows, have upgrade implemented.</li> </ul>	<p>Completed by the end of June 2007</p>	<p>Director of Finance</p>
<p>Upgrade server, and user data shall be backed up securely and regularly.</p>	<ul style="list-style-type: none"> <li>○ At each school location, one server shall have a HDD of at least 40GB installed.</li> <li>○ The AMANDA backup software will be installed on the server</li> <li>○ The AMANDA backup client will be installed on each server needing backup, including the server holding users' data.</li> <li>○ The AMANDA server software will be configured to backup to virtual tape at the end of every weekday all data which is pertinent to the operation of this school.</li> <li>○ User's with local computer accounts will be shown how to put their data in a location which will be backed up by the AMANDA backup system</li> </ul>	<p>Completed by the end of June 2007</p>	<p>Network Administrator</p>

<b>GOALS (IV-D: Upgde. &amp; Rep.)</b>	<b>ACTION STEPS</b>	<b>TIMELINE</b>	<b>ENTITY RESPONSIBLE</b>
Replace the bulky donated CRT monitors in all location with LCD flat panel screens. (starting with Secondary)	<ul style="list-style-type: none"> <li>○ Accept only flat panel monitor donations going forward. We don't have the room to store more CRTs.</li> <li>○ As budget allows start replacing the CRT in Secondary location with flat panels.</li> </ul>	* This is an ongoing goal that may take us 2 to 3 years to fully attain.	Administration, Tech Committee Advisors, and Network Administrator

**SECTION V: SCHOOL DATA SUMMARY**

Report all values as of December 15, 2006

<b>Computer Information</b>														
	<b>Windows-Based Computers</b>						<b>Linux Based Computers</b>						<b>Totals</b>	
	<b>W/ Internet Access</b>			<b>W/O Internet Access</b>			<b>W/ Internet Access</b>			<b>W/O Internet Access</b>				
	<b>I</b>	<b>II</b>	<b>III</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>I</b>	<b>II</b>	<b>III</b>		
<b>Classroom Computers</b>		3							110					113
<b>Lab Computers</b>		13						2						15
<b>Library Computers</b>		0						3						3
<b>Office Computers</b>		35						0						35
<b>Other Instr.</b>		3						15						18
<b>Totals</b>	0	54	0	0	0	0	0	130	0	0	0	0	0	184
<b>Building Information</b>														
	<b>W/ Internet Access</b>						<b>W/O Internet Access</b>						<b>Totals</b>	
<b>Number of Classrooms</b>				24					0					24
<b>Number of Computer Labs</b>				3					0					3
<b>Number of Libraries</b>				3					0					3
<b>Totals</b>				30					0					30
<b>Number of:</b>														
<b>Teachers</b>														25
<b>Administrators</b>														5
<b>Off/Supp Staff</b>														15
<b>Students</b>														514
<b>Instructional Computers</b>														131
<b>Ratio of Students to Computers</b>														4 : 1

## ***SECTION VI: COMMUNITY INVOLVEMENT***

Explore Knowledge Academy School will foster community and parent motivation for student achievement through the use of educational technology. EKA will also encourage relationships or sponsorships with external technology resources (associations, corporations, etc) to assist the school and students in keeping up to date with current technologies.

### **Strategies**

- A. 1. Provide parent workshops at school to increase parent awareness of technology.
- A. 2. Create external technology resource relationships for sponsorship and/or mentorship of the school and the students.
- A. 3. Provide local area newspapers, technology resources and school newsletter (also posted on school website) coverage of school related technology developments.

**SECTION VII: IMPLEMENTATION OF STATE GUIDELINES**

**SECTION VII-A: Level I (Low Tech)**

<u>State Guidelines</u>	(A = Achieved Goal P = In-progress to meet standards N = Site-based Need)	<u>Status</u>
Students & Teachers	Students have at least one hour of direct use of technology per week	A
	Teachers have access to a computer, printer, video display device and VCR in their classroom.	P
	Teachers receive basic training in the use of technology.	P
	Technology is integrated into the curriculum.	P
Networking/Infrastructure	Web/Internet access is available in each classroom.	A
	Video and television technology is available in each classroom.	P
Hardware	At least one network computer is capable of Web browser access.	A
	At least one network computer has sufficient memory to run up-to-date multimedia learning software.	A
Software	Classroom computers have up-to-date networking and operating system software.	A
	Classroom computers have up-to-date productivity software.	A
	Classrooms should have access to video resources.	A
Evaluation	Completion of installation of a networked computer and other video support technologies in each classroom.	A
	Student's successful completion of a pre- and post-test on technology concepts, applications, and skills.	P

**SECTION VII-B: Level II (Mid Tech)**

<u>State Guidelines</u>	(A = Achieved Goal P = In-progress to meet standards N = Site-based Need)	<u>Status</u>
Students & Teachers	Students have at least two hours of direct use of technology in the classroom per week.	A
	Teachers have access to a computer, printer, video display device and VCR in their classroom.	P
	Teachers have training in basic technology skills in instructional application.	P
	Students and teachers use technology for some presentations, projects, and desktop/online publishing.	A
	Teachers use technology to manage instruction and communicate with parents.	A
Networking/Infrastructure	Web/Internet access is available on more than one computer in each classroom.	A
	Video and television technology is available in each classroom.	P
	Each room should have access to networked educational programming.	P
	Connectivity supports student and teacher interactivity.	P
	Connectivity supports improved communication with parents.	P
Hardware	There is more than one computer in each classroom for student use.	A
	All classroom computers are capable of Web browser access.	A
	All classroom computers have sufficient memory to run up-to-date multimedia learning software applications.	P
Software	All classroom computers have up-to-date networking and operating system software.	A
	All classroom computers have up-to-date productivity software.	A
	Classroom should have access to video resources.	A
	Some curriculum-related instructional software is available.	A
	E-mail and Web browser software is available to all classrooms.	A
Evaluation	Students demonstrate minimum computer literacy.	A
	The following areas are expected to show improvement: Student attendance, Truancy statistics, Discipline referrals, Classroom participation, Student performance, School performance Curriculum improvement, District and school accountability information is published on the district web site.	P

**SECTION VII-C: Level III (High Tech)**

<u>State Guidelines</u>	(A = Achieved Goal P = In-progress to meet standards N = Site-based Need)	<u>Status</u>
Teachers and Students	Students and teachers use technology in classrooms, libraries and computer labs.	P
	Students and teachers access online learning resources after regular school hours.	P
	Students and teachers use technology resources for multimedia classroom presentations.	P
	Students and teachers use technology resources for projects, student portfolios, and student publications.	P
	Students and teachers use technology resources for homework assignments.	P
	Students and teachers use technology resources for accessing library and media information resources.	P
	Students and teachers use technology resources for collaborative learning projects.	P
	Students and teachers use technology resources for internet, e-mail and web access.	A
	Teachers participate in on-going training in the effective integration of technology into instruction.	P
	Teachers integrate technology into the curriculum in math, science, social studies, reading/language arts, occupational education, etc.	P
	Teachers use technology to manage instruction.	P
	Teachers and parents communicate via technology.	P
	Networking/Infrastructure	All district buildings are connected through a district WAN.
All classrooms are connected to the district WAN via school LAN's.		A
All classrooms are networked and have Web/Internet access.		A
Classrooms have access to worldwide library and media learning resources.		P
Hardware, networking and software repairs are completed in three working days.		P
Hardware	There is least a ratio of 5 students to each computer.	N
	Computers have sufficient memory and processor speed to run multimedia applications.	P
	Computers have network interface cards and can access and cache multimedia Web and Internet resources.	A
Software	Schools have access to multiple interactive learning technologies that integrate voice, video, and data.	P
	Students and teachers have access to up-to-date multimedia software.	P
	Students and teachers have access to Internet and Web browser software needed to access multimedia resources.	P
	Students and teachers have access to e-mail, and district Intranet learning resources.	A
	Students and teachers have access to up-to-date multimedia word processing, spreadsheet, database, presentation, and desktop publication software.	A
	Students and teachers have access to up-to-date instructional software.	P
	Students and teachers have access to interactive simulation software.	P
Evaluation	The following areas are expected to show improvement: Student attendance, Truancy statistics, Discipline referrals, Classroom participation, Student performance, School performance Curriculum improvement, Ability to use multiple technology tools.	P
	Students can create a curriculum-related publication.	A
	Students can make a presentation using multimedia tools.	A
	Students can complete a curriculum-related project using multimedia tools.	A
	District and school accountability information is published on the district web site.	P

**SECTION VIII: 2005-2006 TECHNOLOGY PLAN EVALUATION**

<b>Objective</b>		<b>Evaluative Documentation</b>
1	Professional Development	Sign-in sheets for Project Foundry and NWEA technology training
		Published list of the technology support team
		Published school technology plan
2	Integration of Technology and Learning	Project Foundry project tracking and grading reports.
		Published learning resources for math, project research, etc.
3	Technology Leadership, Policy and Accountability	Audited and published inventory
		Published acceptable use policy
		Teacher portfolios of student successes
4	Effective Use of Technology Funding and Resources	Copy of letter and survey sent to local businesses or corporate sponsors.
		Published list of specific technologies to be purchased
		Published inventory and updates
5	Public Awareness	Parent workshop sign-in sheets
		Published school homepage
		Student acceptable use policies on file
		Copies of technology publicity