SAU83

Fremont School District

School Administrative Unit #83

TECHNOLOGY PLAN

2012-13 through 2014-15

"Providing an avenue for technology literacy for every student by 8th Grade"

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Committee Approved: 10/17/2012
Board Approved: 01/15/2013

TABLE OF CONTENTS	PAGE NUMBER

Fremont School District Technology Plan 2012 - 2015

Providing an avenue for technology literacy for every student by 8th Grade

I. Introduction

A. 2012-13 Technology Committee Members

Michelle Langa, Superintendent

John Safina, Principal

Jason Carey, Director of Technology

Amber Bishop, Technology Teacher

Dawn DiBurro, 8th Grade Language Arts

Ida Keane, School Board Member

Sharon Girardi, Parent and School Board Member

Greg Fraize, Parent and School Board Member

B. Description of the District and Its Mission

The Fremont School District consists of a single school, grades PreK through 8. Student enrollment as of June 2012 totaled 480. It is managed under School Administrative Unit 83 (SAU 83) and is located in Rockingham County in the seacoast region of the state. According to the NH State Data Center, the population for the town of Fremont in 2010 was 4,200.

In the past, Fremont was characterized as a rural community with a stable population of families who had roots in this town. More recently the town's population has changed to include an increased number of professional people who come from many walks of life and different parts of the country. The Ellis School Vision is to transform our school into a community school where learning is our primary purpose. Ellis School will become the center of learning for our children, parents, citizens and school staff. In this transformation, we will all benefit by taking active roles in our own learning, as well as the learning of others, becoming self-directed learners, traditional leaders, non-traditional leaders, and lifelong learners. Our Technology Plan's design for the next three years is based on certain assumptions about the ever-increasing impact of technology on instruction, administrative functioning, and the need for sufficient support services. It is also based on the well documented knowledge that our students must be competent consumers of technology, both in their career and personal lives, to be successful; technological advances and new knowledge will continue to emerge at an accelerated rate. Schools will be challenged to use

the emergent technologies and to structure the abundance of new information in ways that will be meaningful to students, teachers, and the community.

C. Technology Vision

The vision of Ellis School is to utilize technology to assist students in all areas of the curriculum and across all grade levels. We strive to have a fully integrated technology curriculum in all grades. The school has aligned their technology curriculum to the National standards. Ellis School will incorporate technology into the educational program to achieve the following:

- provide the students with academic skills to allow him/her to excel academically
- provide students with the skills needed to be successful in a digital workflow
- promote problem solving, critical thinking, and research skills
- utilize technology as a tool to prepare students for the next step in their academic careers
- provide staff training and professional development in technology - including peer-based technology leadership
- continue to improve and effectively maintain technology to support the educational system
- continue to use technology as an administrative and collaborative tool

II. Goals

The district is committed to the belief that technology, when appropriately applied, can effectively support improved student achievement and prepare students for the 21st century. To that end, the State's adopted ISTE standards serve as the foundation in the continued development and refinement of both Student Technology Literacy Skills and Teacher Technology Benchmarks. Our broad goals with respect to technology include:

A. Literacy

MEMBERS OF THE EDUCATIONAL COMMUNITY WILL BE ABLE TO UTILIZE TECHNOLOGY.

- Students will attain computer literacy by 8th grade completion, and will be able to successfully transition to high school.
- When given a task, students will be able to select and use appropriate technology.
- Student will be able to utilize technology to enhance their learning.
- Staff and students will ethically use technology as defined by District policies and federal laws.

B. Information Management

MEMBERS OF THE EDUCATIONAL COMMUNITY WILL USE TECHNOLOGY TO ACCESS AND MANIPULATE INFORMATION.

- Students and staff will attain information through the use of technology.
- Students will complete class work by using technology.
- Staff will use technology for classroom information/assessment management.

C. Teaching and Learning

MEMBERS OF THE EDUCATIONAL COMMUNITY WILL USE TECHNOLOGY TO FACILITATE TEACHING AND LEARNING.

- Students will use technology to manipulate and evaluate information in the process of solving problems.
- Students will develop both cooperative and independent learning skills through the use of technology.
- Students will use technology as a vehicle for self-expression. (reflections, portfolio, creative writing, etc.)
- Teachers will use various forms of technology to develop and/or implement units of study to meet the needs of the learner.

D. Communication

MEMBERS OF THE EDUCATIONAL COMMUNITY WILL USE TECHNOLOGY TO COMMUNICATE.

- Students will use technology to share ideas and information within, and outside of, the educational community as per district policy.
- Staff will use technology to share ideas and information within, and outside of, the educational community as per district policy.

III. Action Plan

Current Status

Staff Analysis

The staff at Ellis School is currently communicating daily via e-mail, using digital cameras, creating presentations, creating original documents (such as letters, worksheets, tests, and projects), maintaining student grades and attendance with a comprehensive student information data base (Web2School),- utilizing United Streaming videos, mapping curriculum on a web-based archiving service (TechPaths), tracking data with spreadsheets, creating web sites, using projectors, accessing voice mail, showing DVDs on laptops, projectors, and with

conventional players. Some staff members have become very adept at integrating computer technology into the curriculum. Those members generally offer assistance to other staff members in technology related areas.

The Technology Program is managed by the Director of Technology, who is responsible for budgeting, administration, and maintenance of the technology resources. In addition the Technology Educator is guided by ICT [Information and Communication Technology] Standards. ICT is also implemented by the classroom teacher through interdisciplinary units of study.

Technology Equipment and Infrastructure

Infrastructure and domain

The Ellis School has a Windows network supporting both thick and terminal clients. Currently there are 4 physical servers, 8 virtual servers, and approximately 300 client machines, comprised of desktops, terminals, and laptops. The internal domain is elliseagles.org and the external domain is sau83.org.

Thick clients run a mixture of Windows XP Pro and Windows 7 Pro; there are approximately 150 thick clients. There are 110 thin clients supported by VMWare View 5. The VMWare software allows all 110 thin clients access to a pool of virtual desktops using PCoIP technology. All of the virtual desktops are running Windows 7.

Wiring to the classrooms is either CAT5e or CAT6. There is one main wiring closet and two satellite locations. Each contains a mix of managed and unmanaged switches. The unmanaged switches were all replaced in the winter of 2011 with HP ProCurve business class switches. Recent upgrades/expansion of our infrastructure has allowed the removal of most 5 – 8 port desktop switches, increasing network availability and reliability in the classrooms.

Printers are predominantly HP LaserJets. They are all networked and are managed by a Windows print server for Windows clients and CUPS for Linux Terminal Services clients. There are 3 color printers in the building – two Xerox Phaser solid ink printers and one LaserJet Color printer. There are also 3 network multi-function copiers in the building – providing users with the ability to "scan to email" has dramatically decreased the amount of paper and toner used.

Internet service, as well as primary DNS and public IP addresses, are provided by Comcast via broadband. Gateway and filtering services are provided by a SonicWall 2400MX Firewall with premium content filtering. This unit is capable of handling future growth.
Backup is done via Bitleap, a service provider that incorporates scheduled local and offsite data backup. Backups are done on the Staff home folders and email. The SAU83 Offices also backup to an offsite storage location using Mozy Pro Online Backup solutions.

There are 16 wireless access points that provide wireless Internet access anywhere in the building. All WAPs use WPA-PSK security – users need a shared secret passphrase to access the wireless.

Antivirus is performed by Panda Security – a client is installed on each server/workstation. Protection is updated up to the minute.

Email is hosted locally using Microsoft Exchange 2010. Mail is accessed via the Outlook Web Access mail client at https://mail.sau83.org/OWA. OWA offers users a shared calendar,

shared global address book, and other features that improve communication and productivity.

Anti SPAM is provided by Barracuda Networks, running on a Barracuda Pro Firewall 300. Virus and SPAM definitions are updated up to the minute.

Ellis School has a phone system installed throughout the school, with a phone in each classroom and office. The phone system management software is Merlin Magix. There are currently 8 lines into the school provided by Comcast. Each staff member has their own extension and voice mail.

Authentication and client computers

Our domain is controlled by a Windows Server 2008 R2 server running Windows Active Directory. Students and Staff have home folders located on the network, making their data stored here available anywhere they log on inside the network.

Classroom teachers determine the number of computers in their classroom, which ranges from 2-24 workstations. Both the middle and elementary school student workstations are managed by VMWare View – allowing access to virtual desktops.

All classroom teachers, as well as many professional staff, have a laptop computer. Other staff members have computers available to them.

Peripherals and software

The school has several peripherals available.

- The school has 34 LCD projectors. 32 are ceiling mounted in classrooms, one is on a cart for alternative classroom use and one is at the SAU Office. The educational value of having these projectors has been exceptional; most are used daily by instructors.
- There are several digital cameras available to staff and students.
- There are two digital HD camcorders available to staff and students.
- There are three network scanners available and one desktop color scanner.

The school has several major database applications (not all are hosted internally).

- ADS: financial software
- Web2School: Student Information System
- SNAP: Nurse's Student Information System
- Follett: Library Online Card Catalogue
- Café Services: Cafeteria POS
- SEAS: Special Education
- Active Directory: Network Authentication
- GigaTrak Asset Management (Technology Inventory)

The standard software suite for both staff and student computers are as follows:

- An office suite. Either Microsoft Office 2003 or 2010, or Open Office (current version). Both applications include a word processor, presentation, and spreadsheet application.
- Image Editor. Windows machines have Corel Paint Shop Pro.
- Waterford Early Learning Reading Program (K-2)
- Internet browser. Both Internet Explorer and Mozilla Firefox are provided.
- Administrators and office staff have Adobe Acrobat Pro; used to edit PDFs.
- Follett Software – Online card catalogue system for use in the library
- EBSCO - *EBSCO Discovery Service*™ brings together the most comprehensive collection of content—including superior indexing from top subject indexes, high-end full text and the entire library collection—all within an unparalleled full-featured, customizable discovery experience.
- Discovery Education - Discovery Education transforms classrooms, empowers teachers and captivates students by leading the way in providing high quality, dynamic, digital content to school districts large and small, rural and suburban and everything in between.

Other applications are provided as necessary for educational or operational needs.

Two to three times a year the school engages in NWEA, a computerized assessment of reading, language usage, math, and science.

A. Access to Technology

One overarching goal is to continuously manage a five-year replacement program for all computers and peripherals in order to maintain a high standard of educational functionality. Except for network devices and servers, computer equipment lifespan will be managed as follows:

Year 1: Purchase and install system

Year 2: Maintain existing placement

Year 3 & 4: Reassign for a low intensity application or upgrade

Year 5: Phase-out old system and replace with new system

Classroom Equipment

Goal 1: Follow the five-year plan to upgrade and replace classroom equipment including computers, monitors, and peripherals. Computers will be purchased to maintain a student to computer ratio of 2:1 in the middle school and 4:1 in the elementary school. An electronic inventory will help to manage this process by keeping track of when equipment is purchased and what specifications it has.

Goal 2: Maintain ceiling-mounted projectors in each classroom. The projectors have proven themselves such a valuable asset that this justifies maintaining and replacing each one as needed.

Goal 3: Begin to phase out noncritical networked printers. Promote use of network multi-function copiers. The copiers are less expensive to run and provide users with a "Scan to Email" function – reducing the need for paper. Copiers and monochrome laser printers should

be easily accessed in conveniently located areas. Color printer(s) to be located less frequently, and used as necessary.

Staff laptops

Goal 1: Follow the five-year plan to replace laptops for staff use, assuring that all teachers and administration have working computers.

Goal 2: Purchase additional laptops for staff as necessary to maintain high functioning educational and organizational workflow.

Servers and network devices

Goal 1: Plan to upgrade and replace servers and network devices. This includes servers, switches, network appliances, and firewalls. An inventory will help to manage this process by keeping track of when equipment is purchased and what specifications it has.

Goal 2: Purchase new network equipment as necessary to maintain high functionality for educational and organizational computing.

Goal 3: Upgrade network devices to allow for network subnetting that will increase both performance and security on the network.

Goal 4: Discontinue hosting SAU83.ORG website on a local server. A new website will be hosted offsite.

Goal 5: Maintain a server for email, hosted at the school, with any necessary upgrades or changes in network management to maintain its security and disaster recovery.

Goal 6: Use server virtualization whenever possible. Virtualization eliminates the need for having/maintaining/replacing multiple physical servers.

Goal 7: Add email archiving appliance/software

Goal 8: Replace individually managed wireless access points with a centrally managed solution. This will allow the network administrator to manage all of the buildings wireless access points from a central controller.

Maintenance and upgrades

Goal 1: Perform maintenance on all technology equipment once per year, including physical cleaning and re-installation of software, as necessary. This may be performed by in-house staff or by a service provider.

Goal 2: Upgrade computers as dictated by the 5-year replacement plan.

B. Infrastructure

Goal 1: Maintain Ethernet, fiber, and wireless networking currently installed. Add ports and access points as necessary.

Goal 2: Maintain phone system wiring currently installed. Add ports as necessary.

Goal 3: Maintain current Internet connectivity through Comcast. Monitor bandwidth usage; investigate purchasing increased bandwidth if capacity is reached.

Goal 4: Add electrical outlets and circuits as necessary to provide adequate power for technology equipment.

Goal 5: Maintain consistent temperature of data center/wiring closets such that equipment installed there continues to operate at optimal levels.

Goal 6: Maintain industry standard backup and recovery practices to ensure reasonable data security and disaster recovery.

C. Software and Online Resources

Goal 1: Provide a standard suite of applications on every computer which meets the general needs of staff and students. Use FOSS (Free and Open Source Software) where appropriate.

Goal 2: Provide age-appropriate software and online resources to meet the needs of each student and staff.

Goal 3: Update and maintain administrative applications, including student information, health management, library catalog, special education, and cafeteria services systems.

D. Professional Development

Goal 1: Continue Technology Leader program, the members of which will model good practice of technology for the teaching staff and provide professional development in technology for the school district. The objectives of this program will be:

- To have a Technology Leader be available to train district staff using a mentor program.
- To be creative in scheduling so that teachers can attend training during professional time, rather than personal time, to assure widespread attendance.

Goal 2: Continue to increase staff expertise, comfort, and competency levels in the use of technology as an integral part of their professional experience. Advise staff to continue to generate staff development goals in line with the state and local curriculum requirements. Provide staff development opportunities to all staff, including administrators, teachers, and paraprofessionals to allow for advancement through different levels of expertise. Include the following opportunities for all staff:

- Take advantage of workshops and seminars on educational application of technology, including those offered by the SPDC, OpenNH, and NHSTE.
- Provide time for staff to create innovative technology projects to improve learning.
- Make available the individual support from the Technology Leader on an as needed basis.

E. Technology Literacy

Please see Appendix 1 for the Fremont School District's ICT Literacy Standards.

Goal 1: Continue to implement the technology skills and assessment that were approved by the School Board in the fall of 2004.

- Develop a school-wide ePortfolio system
- Provide ongoing training and reference materials to aid teachers in the assessment process.

Goal 2: Teachers will increase the level of technology integration in their instruction.

- Provide ongoing training and reference materials to aid teachers in the assessment process.
- Maintain basic software applications and use of Internet resources.
- A Technology Leader will work with individual teachers to help answer technology questions on integrating technology.
- Provide all staff members with updated Techpath training to include beginner, intermediate, and advance knowledge levels.
- Provide teacher training on hardware/software use, as well as all peripherals.

Goal 3: Technology will be used by all students and staff to enhance and encourage learning accordance with NETS/S Next Generation

- Students will be expected to apply decision-making and/or problem-solving skills when creating presentations, gathering information from the Internet, or analyzing data.
- Appropriate technological resources, such as spreadsheet programs, will be used to analyze data.
- Consistent encouragement of the use of proper referencing of document sources.
- Applications such as an electronic library system and online reference sources will be used to stimulate thorough and accurate research methods. Research skills will be taught as part of interdisciplinary units.

Goal 4: Technology will be used by students and staff to meet the needs of different learning styles.

- Specialized and recommended computer programs will be available to meet specific students, for example, E-books would be used for students who are not developmentally ready to read.
- Multimedia programs and presentation software will be used to accommodate multiple learning styles.
- LCD projectors/interactive whiteboards will be available to address the needs of multiple learning styles.

Goal 5: Computer technology will allow for alternative means of assessing student knowledge and performance.

- Assessments/ data input and recorded for Everyday Math and Aims Web to Performance Tracker for comprehensive reporting.
- Student information system will be used by teachers in grades 1 through 8 to track student progress.
- NWEA (Northwest Evaluation Association), an electronic testing program which provides researched-based, educational growth measures, will be used to assess student instructional levels in grades 2 through 8.

Goal 6: Ellis School provides access to innovative learning and distance learning programs on an as needed basis. Such as VLACS Learning, GSN and we are exploring making the John Hopkins program for gifted and talented students available.

F. Personnel

Goal 1: One full-time Director of Technology responsible for the management and technical needs of the district.

Goal 2: One full-time Technology Educator responsible for providing classes based on NETS/s Next Generation to Kindergarten through 8th Grade.

Goal 3: Provide budget to hire consultants as necessary to provide technology expertise to maintain and improve technology offerings. Re-assess the need each year to determine what budget is necessary.

G. Community

Goal 1: Maintain website with current information as the primary communication model to community.

Goal 2: Continue to provide online newsletter to community.

Goal 3: Continue using Alert Now system to send information as immediately necessary.

Goal 4: At this time, there is no Adult Literacy Programs in Fremont. If the need arises we will collaborate with the community to share district technology resources.

IV. Data Collection and Evaluation

We will continue to evaluate our staff needs and provide training and equipment as necessary.

The Technology Committee, headed by the Director of Technology, meets regularly to evaluate the status of technology in the building, and will continue to review this document to update it with current practice and needs. Changes to this document will be made only with approval of the school board.

LoTi Survey – The district will use the LoTi Survey during the 2012-2013 and 2013-2014 School Years to survey the staff in regards to computer literacy and integration. This will also help us in preparation for the Smarter Balance Testing coming in 2014.

V. Budget

Budget Narrative

The proposed technology budget supports the technology plan in the following ways:

- Increase the number of workstations in the library computer lab and expand the current infrastructure by adding additional data ports and power receptacles.
- Replace PC computer lab workstations per the 5 year replacement schedule.
- Replace Literacy classroom computer cluster (10 workstations) per the 5 year replacement schedule.
- In 2013, following the 5 year replacement schedule, the District will begin a three year plan to replace all LCD displays with LED displays. This will decrease the amount of energy used by the district.
- Replace office personal desktop workstations per the 5 year replacement schedule.
- Replace staff laptops per the 5 year replacement schedule.
- Replace ceiling mounted LCD projectors with DLP projectors per the 5 year replacement schedule. The DLP projectors last longer and will decrease the amount of energy consumed by the district.
- Repair and maintain current LaserJet network printers.
- Repair and maintain district servers and network devices.

- Replace, repair and maintain network switches. The District has successfully converted all of its 10/100 network switches over to Gigabit network switches increasing network performance.
- Replace thin clients per the 5 year replacement schedule. Add additional thin clients as needed.
- Replace firewall at District office.
- Purchase service agreements for SonicWall network firewall appliances. The agreements include access to SonicWall's Premium Content Filtering Service.
- Continue providing a data backup solution for both Ellis School and the SAU83 District Office. All critical data will be backed up both onsite and offsite.
- Replace SPAM filter appliance per 5 year replacement schedule.
- Replace the SAU83 website. A new website will be hosted offsite eliminating the need for hardware replacement.
- Expand, repair and maintain current infrastructure as needed.
- Replace wireless access point at the District Office per the 5 year replacement schedule.
- Repair and maintain current wireless network at Ellis School.
- Replace the wireless network at Ellis School with a centrally managed wireless network controller and managed access points.
- Replace, repair and maintain computer furniture as needed.

Other Funding Sources

The Fremont School District will continue seeking additional funding sources. The District will apply for the E Rate discount. The District has and will continue using Title II-D funds for professional development and to supplement staff technology.

Estimated goals budget
Note: This is not a complete technology budget, but serves as a guide to accommodate updates and enhancements to our existing technology program. Changes to this budget based on changes in technology over the next 3 years is expected.

Objective *Hardware*	**Amount 2012-2013**	**Notes**	**Amount 2013-2014**	**Notes**	**Amount 2014-2015**	**Notes**
Classroom Computer & Peripheral Replacement	$6,000	Replace Library PCs (8)	$6,000	Replace 1/3 of the PC Lab	$14,000	Replace 1/3 of the PC Lab and Rm. 502 Literacy LAB (10 PCs)
LED Monitors	----------	----------	$5,000	Replace end of life LCD monitors	$5,000	Replace end of Life LCD monitors
Software	----------	----------	$3,000	Replace Follett/Library Card Catalouge	----------	----------
Office Computer	----------	----------	----------	----------	$3,000	Replace Main Office PCs/Nurse's

Replacement						PC/Business Admin PC
Staff Laptops	$10,000	Replace Staff Laptops	$10,000	Replace Staff Laptops	$10,000	Replace Staff Laptops
Projectors	$4,800	Replace Projectors	$6,000	Replace Projectors	$12,800	Replace Projectors
LaserJet Printer	$900	Replace LaserJet at SAU Office	$500	Repair/Maintain	$500	Repair/Maintain
Server	$2,500	Repair/ Maintenance	$2,500	Repair/Maintain	$2,500	Repair/Maintain
Switches	$3,500	Replace Core Switch/ Unmanaged Switches	$750	Repair/Maintain Replace (3) switches	$500	Repair/Maintain
Thin Clients	$9,600	Replace 30/100 Thin Clients	$1,750	Add four new Thin Clients	----------	----------
Firewall	$2,500	Replace Firewall at SAU Office	$2,000	Renew 2 yr. Content Filter Service	----------	----------
Network storage	$1,500	Bitleap Lics. Mozy SNAP	$2,500	Create Ellis' Own offsite/ Onsite Backup	$500	Maint/Repair of Ellis' own hardware
SPAM Filter for E Mail/Archiver	----------	----------	$5,500	Replace SPAM Firewall/Add email archiving	$1,000	Software for SPAM Virus/Archiver
SAU83.org WEBSITE/Web Server	----------	----------	$30,000	Host website offsite/brand new website	$1,000	Annual Offsite Host Fee
Infrastructure	$1,000	Add 6 data ports to library (8 total)	$1,500	Expand/Maintain/ Repair Infrastructure	$1,000	Expand/Maintain/ Repair Infrastructure

WiFi	$180	Replace SAU Office WAP	$500	Repair/Maintain WiFi Infrastructure	$15,000	WiFi Management/new WAPs
Furniture	$900	Replace PC Tables	$900	Repair/Maintain PC Tables	$900	Repair/Maintain/ Replace PC Tables

VI. Policy & Procedure

A. Children's Internet Protection Act (CIPA)

Blocking and Filtering Measures

The Fremont School District filters all Internet traffic, for both staff and students, through the network's firewall appliance. Filtering is done by IP address and is enforced on all District owned computers accessing the Internet. For an annual fee the District uses SonicWall's Premium Content Filtering Service. In compliance with the Children's Internet Protection Act SonicWall's Premium Content Filtering Service is used by the Fremont School District to protect against access by adults and minors to visual depictions that are obscene, contain child pornography, or with respect to use of computers with Internet access by minors, are harmful to minors.

To learn more, please review the SonicWall Content Filtering Service – Premium Administrator's Guide here:

http://o-www.sonicwall.com/app/projects/file_downloader/document_lib.php?t=PG&id=212

B. Internet Safety Policy

FREMONT SCHOOL DISTRICT
EHAA - COMPUTER SECURITY, E-MAIL AND INTERNET COMMUNICATIONS POLICY

The District has established this policy with regard to access and disclosure of electronic data composed, stored, sent, or received by employees using the District computer system. This policy is designed to protect the safety and security of the District's computer systems when using any services hosted by the District, including e-mail and Internet use.

The District intends to enforce the rules set forth below and reserves the right to change these rules at any time.

1. The computer hardware system, software and **e**-mail system are owned by the District, and all messages or data composed, stored, sent, or received using the system are and remain the private property of the District. They are not the property of the employee.

2. The computer and **e**-mail system is to be used for business purposes only. Personal business is unauthorized and should not be conducted on the system.

3. The electronic mail system may not be used to solicit or proselytize for commercial ventures,

religious or political causes, outside organizations, or other non-job-related solicitations.

4. The District prohibits discriminatory, harassing, or offensive materials in any form of media. Among those which are considered offensive are any messages which contain sexual implications, racial slurs, gender-specific comments, or any other comments that offensively address someone's age, sexual orientation, religious or political beliefs, national origin, or disability.

5. The **e**-mail system shall not be used to send (upload) or receive (download) illegally distributed electronic materials, trade secrets, proprietary financial information, or similar materials without prior authorization.

6. The District reserves, and intends to exercise without prior notice, the right to read, review, audit, intercept, access or disclose any and all information on an employee's computer system or messages created, received or sent over the electronic mail system for any purpose, even if coded or passworded.

7. The confidentiality of any message or data should not be assumed. Even when a message is erased, it is still possible to retrieve and read that message. The use of passwords for security does not guarantee confidentiality, or that the District will not retrieve it.

8. Any communications created, sent, or retrieved using **e**-mail may be read by individuals other than the intended recipient.

9. Notwithstanding the District's right to retrieve and monitor any **e**-mail messages, such messages should be treated as confidential by other employees and accessed only by the intended recipient. Employees are not authorized to retrieve or read any **e**-mail that is not sent to them. Any exception to this policy must receive prior approval by the Superintendent.

10. Any employee who violates this policy or uses the computer system or electronic mail system for improper purposes shall be subject to discipline up to and including discharge.

11. The District has the authority to terminate or limit access to any program at any time.

12. Personal disks cannot be used on the system unless pre-authorized by the computer administrator.

Legal Reference: *RSA 194:3-d, School District Computer Networks*

First Reading 7/08/2008
Second Reading 9/23/2008
Adopted 10/28/2008

C. Public Notice and Hearing

FREMONT SCHOOL DISTRICT
BEDA - PUBLIC NOTIFICATION OF SCHOOL BOARD MEETINGS

Category R

All School Board Meetings are open to the public. The Board will announce at least 24 hours in advance (excluding Sundays and legal Holidays) through two public postings and, when possible, by the newspapers and the local radio station, the date, time, and place of all regular and special meetings and the major topics to be discussed.

The Board may need to hold an emergency meeting in the case where immediate un-delayed action is deemed to be imperative by the Chair or presiding Officer of the body or agency,

who shall employ whatever means are available to inform the public that a meeting is to be held. The minutes of the meetings shall clearly spell out the need for the emergency meeting.

Legal Reference: *RSA 91-A:2, II, Public Records and Meetings: Meetings Open to the Public*
First Reading: 10/23/07
Second Reading: 11/13/07
Adopted 11/27/2007

D. Copyright & Fair Use

FREMONT SCHOOL DISTRICT
EGAD - COPYRIGHT COMPLIANCE

Category R

The District recognizes that federal law makes it illegal to duplicate copyrighted materials without authorization of the holder of the copyright, except for certain exempted purpose**s**. Severe penalties may be imposed for unauthorized copying or using audio, visual or printed materials and computer software, unless the copying or using conforms to the "fair use" doctrine.

Under the "fair use" doctrine, unauthorized reproduction of copyrighted materials is permissible for such purposes as criticism, comment, news reporting, teaching, scholarship or research.

The District encourages its staff to enrich the learning programs by making proper use of supplementary materials**,** however, it is the responsibility of District staff to abide by the District's copying procedures and obey the requirements of the law. District staff shall not, under any circumstances, violate copyright law. The District is not responsible for any violations of copyright law by its staff.

Any staff member who is uncertain as to whether reproducing or using copyrighted material complies with the District's procedures or is permissible under the law should contact the Superintendent. The Superintendent will assist staff in obtaining proper authorization to copy or use protected materials when such authorization is required.

Legal Reference*: 17 U.S.C. 101 et seq., United States Copyright Law of 1976*

First Reading: 5/26/2009
Second Reading: 10/27/09
Adopted: 11/17/09

FREMONT SCHOOL DISTRICT
EGAD-R COPYRIGHT COMPLIANCE
Authorized Reproduction and Use of Copyrighted Material in Print

In preparing for instruction, a teacher may make or have made a single copy of a Chapter from a book; and article from a newspaper or periodical; a short story; Short essay or short poem; or a chart, graph, diagram, cartoon or picture from a book, periodical or newspaper. A teacher may make multiple copies not exceeding more than one per pupil for classroom use if the copying meets the test of "brevity, spontaneity and cumulative effect" set by the following guidelines. Each copy must include a notice of copyright.

1. **Brevity**

a. A complete poem, if less than 250 words and two pages long, may be copied; excerpts from longer poems cannot exceed 250 words;

b. Complete articles, stories or essays of less than 2500 words or excerpts from prose works less than 1000 words or 10% of the work; whichever is less may be copied; in any event, the minimum is 500 words. (Each numerical limit may be expanded to permit the completion of an unfinished line of a poem or prose paragraph)

c. One chart, graph, diagram, drawing, cartoon or picture per book or periodical issue may be copied. "Special" works cannot be reproduced in full; this included children's books combining poetry, or prose or poetic prose.

2. **Spontaneity**

Should be at the "instance and inspiration" of the individual teacher.

3. **Cumulative Effect**

Teachers are limited to using copied material for only one course in the school in which copies are made. No more than one short poem, article, story or two excerpts from the same author may be copied, and no more than three works can be copied from a collective work of periodical column during one class term.

Teachers are limited to nine instances of multiple copying for one course during one class term. Limitations do not apply to current news periodicals, newspapers and current news sections of other periodicals.

Performances by teachers or students of copyrighted dramatic works without authorization from the copyright owner are permitted as part of a teaching activity in a classroom or instructional setting. All other performances require permission from the copyright owner.

The copyright law prohibits using copies to replace or substitute for anthologies, consumable works, compilations or collective works. "Consumable" works include: workbooks; exercises, standardized tests, test booklets and answer sheets. Teachers cannot substitute copies for the purchase of books, publishers' reprints or periodicals, nor can they repeatedly copy the same item from term-to-term.

Copying cannot be directed by a "higher authority," and students cannot be charged more than actual cost of photocopying. Teachers may use copyrighted materials in overhead or opaque projectors for instructional purposes.

Authorized Reproduction and Use of Copyrighted Materials in the Library

A library may make a single copy of an unpublished work which is in its collection; and a published work in order to replace it because it is damaged, lost or stolen, provided the unused replacement cannot be obtained at a fair price.

A library may make a single copy of a copyrighted material to a student or staff member at no more than the actual cost of photocopying. The copy must be limited to one article of periodical issue or a small part of other material, unless the library finds that the copyrighted work cannot be obtained elsewhere at a fair price. In the latter circumstances, the entire work may be copied. In any case, the copy shall contain the notice of copyrighted and the student or staff member shall be notified that the copy is to be used only for private study, scholarship or research. Any other use may subject the person to liability for copyright infringement.

At the request of a teacher, copies may be made for reverse use. The same limits apply as for single or multiple copies designated in "Authorized Reproduction and Use of Copyrighted Material in Print".

Authorized Reproduction and Use of Copyrighted Music

A teacher may make a single copy of a song, movement, or short section from a printed musical work that is unavailable except in a larger work for purposes of preparing for instruction.

A teacher may make multiple copies for classroom use of an excerpt of not more than 10% of a printed musical work if is to be used for academic purposes other than performance, provided that the excerpt does not comprise a pat of the whole musical work which constitute a performable unit such as a complete section, movement, or song.

In an emergency, a teacher may make and use replacement copies of printed music for an imminent musical performance when the purchased copies have been lost, destroyed or are otherwise not available.

See Policy EGAD

E. Acceptable Use Policy

FREMONT SCHOOL DISTRICT
JICL - SCHOOL DISTRICT INTERNET ACCESS FOR STUDENTS

The School Board recognizes that technological resources can enhance student performance by offering effective tools to assist in providing a quality instructional program, facilitating communications with parents/guardians, teachers, and the community, supporting District and school operations, and improving access to and exchange of information. The Board expects all students to learn to use the available technological resources that will assist them in the performance of their education. As needed, students shall receive lessons and instruction in the appropriate use of these resources.

Students shall be responsible for the appropriate use of technology and shall use the District's technological resources primarily for purposes related to their education. Students are hereby notified that there is no expectation of privacy on district computers, computer files, email, internet usage logs, and other electronic data.

The Superintendent or designee shall ensure that all District computers with Internet access have a technology protection measure that prevents access to visual depictions that are obscene or pornographic and that the operation of such measures is enforced. The Superintendent or designee may disable the technology protection measure during use by an adult to enable access for bona fide research, educational or other lawful purpose.

The Superintendent shall establish administrative regulations and an Acceptable Use Agreement that outlines student obligations and responsibilities related to the use of District technology. He/she also may establish guidelines and limits on the use of technological resources. Inappropriate use may result in a cancellation of the student's user privileges, disciplinary action, and/or legal action in accordance with law, Board policy, and administrative regulations.

The Superintendent or designee shall provide copies of related policies, regulations, and guidelines to all students. Students shall be required to acknowledge in writing that they have read and understood the District's Acceptable Use Agreement.

Legal References:

RSA 194:3-d, School District Computer Networks
47 U.S.C. §254, Requirements For Certain Schools – Internet Safety
20 U.S.C. §6777, Enhancing Education Through Technology – Internet Safety

Appendix: JICL-R

First Reading: 11-27-12
Adoption: 11-12-12

FREMONT SCHOOL DISTRICT
JICL-R, ACCEPTABLE INTERNET USE PROCEDURES - STUDENTS

Purpose

The purpose of the Acceptable Use Procedures is to provide the procedures, rules, guidelines, and the code of conduct for the use of technology and the Internet.

Definition

The definition of "information networks" is any configuration of hardware and software, which connects users. The network includes, but is not limited to, all of the computer hardware, operating system software, application software, stored text and data files. This includes electronic mail, local databases, externally accessed databases, CD-ROM, recorded magnetic or optical media, clip art, digital images, digitized information, communications technologies, and new technologies as they become available. Stand-alone workstations are also governed by this acceptable use procedure.

The School District Services

The School District provides resources for teaching and learning, communication services, and business data services by maintaining access to local, regional, national, and international sources of information. The School District information resources will be used by members of the school community with respect for the public trust through which they have been provided and in accordance with policy and regulations established by the School District. These procedures do not attempt to articulate all required for proscribed behavior by its users.

Successful operation of the network requires that all users conduct themselves in a responsible, decent, ethical and polite manner while using the network. The user is ultimately responsible for his/her actions in accessing network services.

Guidelines

1. Access to the networks and to the information technology environment within the District is a privilege and must be treated as such by all users of the network and its associated systems.

2. Information networks will be used for the purposes of research, education, and school-related business and operations.

3. Any system which requires password access or for which the District requires an account, such as the Internet, will only be used by the authorized user. Account owners are ultimately

responsible for all activity under their accounts.

4. The resources of the District are limited. All users must exercise prudence in the shared use of this resource.

Unacceptable Use

The District has the right to take disciplinary action, remove computer and networking privileges and/or take legal action, for any activity characterized as unethical and unacceptable. Unacceptable use activities constitute, but are not limited to, any activity through which any user:

1. Violates such matters as institutional or third-party copyright, license agreements or other contracts. The unauthorized use of and/or copying of software is illegal.

2. Interferes with or disrupts other network users, services or equipment. Disruptions include, but are not limited to: distribution of unsolicited advertising, propagation of computer worms or viruses, distributing quantities of information that overwhelm the system, and/or using a District network to make unauthorized entry into any other resource accessible via the network.

3. Seeks to gain or gains unauthorized access to information resources.

4. Uses or knowingly allows another to use any computer or computer system to devise or execute a scheme to defraud or to obtain money, property, services, or other things of value by false pretenses, promises, or representations.

5. Destroys, alters, dismantles or otherwise interferes with the integrity of computer based information and/or information resources.

6. Invades the privacy of individuals or entities.

7. Uses the network for commercial or political activity.

8. Installs unauthorized software for use on District computers.

9. Uses a network to access inappropriate materials.

10. Submits, publishes or displays any defamatory, inaccurate, racially offensive, abusive, obscene, profane, sexually oriented, or threatening materials or messages either publicly or privately.

11. Uses a District network for illegal harassing, vandalizing, inappropriate or obscene purposes, or in support of such activities.

School District Rights

The District reserves the right to:

1. Monitor all activity. Notwithstanding FERPA and other related laws, students have no expectation of privacy regarding their use on the school district computer network.

2. Make determinations on whether specific uses of a network are consistent with these acceptable use procedures.

3. Log network use and monitor storage disk space utilization by users.

4. Determine what is appropriate use.

5. Remove a user's access to the network at any time it is determined that the user engaged in unauthorized activity or violated these acceptable use procedures.

6. Cooperate fully with any investigation concerning or relating to the District's network activity.

School District Internet Code of Conduct

Use of the Internet by students and staff of the District shall be in support of education and research that is consistent with the mission of the District. Internet use is limited to those persons who have been issued District-approved accounts. Use will be in accordance with the District's Acceptable Use Procedures and this Code of Conduct. Users are expected to abide by the following terms and conditions:

1. Protect their Internet log from information from others.

2. Respect the privacy of other users. Do not use other users' passwords.

3. Be ethical and courteous. Do not send hate, harassing or obscene mail, discriminatory remarks, or demonstrate other antisocial behaviors.

4. Maintain the integrity of files and data. Do not modify or copy files/data of other users without their consent.

5. Treat information created by others as the private property of the creator. Respect copyrights.

6. Use any network in a way that does not disrupt its use by others.

7. Do not destroy, modify or abuse the hardware or software in any way.

8. Do not develop or pass on programs that harass other users or infiltrate a computer or computing system and/or damage the software components of a computer or computing system, such as viruses, worms, "chain" messages, etc.

9. Do not use the Internet to access or process pornographic or otherwise inappropriate material.

10. Do not use the Internet for commercial purposes.

The District reserves the right to remove a user's account if it is determined that the user is engaged in unauthorized activity or is violating this code of conduct.

School District Internet Access Release Form

As a condition of my right to use the School District network resources, including access to the Internet, students understand and agree to the following:

1. To abide by the District Acceptable Use Procedures and Code of Conduct.

2. That District administrators and designated staff have the right to review any material stored on District computers in files and to edit or remove any material which they, in their sole discretion, believe may be unlawful, obscene, abusive, or otherwise objectionable and students hereby waive any right of privacy which I may otherwise have to such material.

3. That the School District will not be liable for any direct or indirect, incidental or consequential damages due to information gained and/or obtained via use of the District's network resources.

4. That the School District does not warrant that the functions of any District network, or any network accessible through District resources, will meet any specific requirements you may have, or that the network resources will be error-free or uninterrupted.

5. That the School District shall not be liable for any direct or indirect, incidental or consequential damages (including lost data or information) sustained or incurred in connection with the use, operation, or inability to use District networks and resources.

6. That the use of the District network(s), including access to public networks, is a privilege which may be revoked by network administrators at any time for violation of the Acceptable Use Procedures and Code of Conduct. The School District will be the sole arbiter(s) of what constitutes violation of the Acceptable Use Procedures or Code of Conduct.

7. In consideration for the privilege of using the School District network resources and in consideration for having access to the public networks, I hereby release the School District, its operators, and any institutions with which they are affiliated from any and all claims and damages of any nature arising from my use, or inability to use, the District network resources.

Name of User/Student: _____

Home phone: _____

School of Attendance: _____

I hereby certify that I have read the Acceptable Use Policy and Procedures; that I fully understand their terms and conditions; and that I will abide by the terms conditions set forth in those documents.

Signature of User/Student: _____

Date: _____

Signature of Building Principal: _____

Date: _____

APPENDIX 1. ICT Literacy Standards

Utilizing Technology Skills in the Computer Classroom

Using 306.42(a)(1)(4) as the base, Ellis School's technology plan requires an integrated approach to the use of 21st century tools within all curriculum areas through the adoption of an information and communication technologies literacy (ICT) program. This is provided in grades K – 12 as opportunities at developmentally appropriate levels for students to (1) develop knowledge of ethical, responsible use of technology tools in a society that relies heavily on knowledge of information in its decision making; and (4) Use 21st century tools to develop technical proficiencies at a foundation knowledge level in a. Hardware; b. Software applications; c. Networks; and d. Elements of digital technology in the Computer classroom as follows:

Students at Ellis School, from Kindergarten to 8th grade, receive a weekly computer class. This computer class focuses on teaching students basic skills in the lower elementary grade, and demonstrating full comprehension and understanding by 8th grade graduation. Students develop understanding, comprehension, and vocabulary for various technology proficiencies. Younger elementary grades build a knowledge and understanding of basic elements of digital technology, such as identifying and labeling various pieces of technology, the different parts of a computer, and the operation concepts and systems.

As students' progress in the Ellis School ICT plan, students begin gaining a deeper understanding of hardware and software applications, learning more than basic operations and concepts. In accordance with International Society for Technology in Education: 6. Technology Operations and Concepts, students begin to transfer current knowledge to the learning of new technologies and begin to select and use applications effectively and productively. Students are beginning to utilize and feel comfortable with programs such as Microsoft Word, Microsoft PowerPoint, and Microsoft Excel. Students also can navigate, and use independently, creative programs such as Paint or Kid Pix, which allow students to create graphics, pictures, or projects on the computer about a variety of topics. Students can also confidently navigate the internet and use the World Wide Web for different education areas, such as viewing and reading e-books, researching information on the internet, and properly navigating a website.

By 8th grade, students have developed a strong understanding and foundation of technology, the various uses, and have fulfilled the Ellis School Technology Power Standards. See the appendix for the Ellis School Technology Power Standards for the progression of these skills and concepts.

All students enrolled at Ellis School learn the importance of responsibly using technology and how to ethically use the internet and other resources. Ensuring that students know how to practice safe, legal, and responsible use of information technology is critical to ensuring that students become aware and knowledgeable digital citizens. Teaching students about the responsibility of their digital footprints and the future of the technology is also discussed at age appropriate levels within the computer classroom.

Digital Portfolio

Using 306.42(a)(5) as the base, Ellis School's technology plan requires an integrated approach to the use of 21st century tools within all curriculum areas through the adoption of an information and communication technologies literacy (ICT) program in grades K – 12 that provides opportunities at developmentally appropriate levels for students to (5) create digital portfolios which: address the following components: 1. Basic operations and concepts; 2. Social, ethical and human issues; 3. Technology productivity tools; 4. Technology communication tools; 5. Technology research tools; and 6. Technology problem solving and decision-making tools; as follows:

The Digital Portfolio process begins at Ellis school in 5th grade, and students continue working on the project throughout their middle school years. The Digital Portfolio provides as an electronic demonstration of student projects that pupils have created in their middle school computer classes. These projects align with the Ellis School Technology Power Standards and can demonstrate student comprehension, growth, and development of the student throughout middle school.

As students prepare for their 8th grade graduation, and their departure from Ellis School, Students will be provided with the Digital Portfolio rubric. Students must create a section of their Digital Portfolio labeled "Digital Portfolio Culminating Project", students will be asked to review the artifacts they have created throughout Middle School, and must match an artifact with each of the Ellis School Technology Power Standards. The artifacts that the students select should not only meet the Ellis School Technology Standard, but also represent a project that the student is proud of, or is of importance to the student. Students may use artifacts that were created using technology from other content areas besides Computers class. An artifact is defined as something the student made using technology, i.e., a project or lesson that was completed on the computer.

Example Digital Portfolio

Johnny Appleseed's Digital Portfolio
Time Capsule

All About Me
2nd Grade All About Me PowerPoint
3rd Grade All About Me Kite
6th Grade All About Me Glog
8th Grade All About Me Animoto

5th Grade Technology Artifacts
Projects Listed Below

6th Grade Technology Artifacts
Projects Listed Below

7th Grade Technology Artifacts
Projects Listed Below

8th Grade Technology Artifacts
Projects Listed Below

Digital Portfolio Culminating Project

Creativity and Innovation
Artifact #1 – Project Name

Communication and Collaboration
Artifact #1 – Project Name

Research and Information Fluency
Artifact #1 – Project Name

Critical Thinking, Problem Solving and Decision Making
Artifact #1 – Project Name

Digital Citizenship
Artifact #1 – Project Name

Technology Operations and Concepts
Artifact #1 – Project Name

Reflections
5th Grade Technology Reflections
6th Grade Technology Reflections
7th Grade Technology Reflections
8th Grade Technology Reflections

Digital Portfolio Rubric

Standard & Indicators	No Evidence	Novice	Partially Proficient	Proficient	Proficient with Distinction
	0	1	2	3	4
Creativity and Innovation As a student, I have demonstrated creative thinking, construct knowledge and developed innovative products and processes using technology in support of content *Evidence of artifacts may include:* • Expressing myself in digital work • Using existing knowledge to generate new ideas, products or procedures • Create original work as a way to express yourself or for group expression To identify trends and forecast possibilities	No Evidence	The portfolio shows efforts at meeting this standard.	The portfolio shows some evidence of this standard.	The portfolio shows clear evidence of this standard.	The portfolio shows outstanding evidence of this standard.
Communication and Collaboration As a student, I have demonstrated the use of digital media and environments to communicate and work collaboratively,	No Evidence.	The portfolio shows ineffectiv	The portfolio shows use of 1 tool	The portfolio shows use of 2 tools	The portfolio shows use of 2 or more tools in a

including at a distance, to support individual learning and contribute to the learning of others *Evidence of Artifacts may include:* • Use of digital tools to communicate and/or work collaboratively with others locally and globally • Create original works individually or as a group to problem solve Tools or artifacts can include but is not limited to include: projects from Computers or another class at Ellis School, wikis, blogs, email, online surveys and video conferencing		e use of tool(s)	effectively.	or 1 tool a few ways effectively.	variety of ways.
Research and Information Fluency As a student, I can use digital tools to gather, evaluate and use information. *Evidence of Artifacts may include:* • Demonstrating use of search engines, online databases, RSS feeds to gather, evaluate and use information effectively • Ethically use information from a variety of sources • Evaluate and select information sources and digital tools based on the appropriateness to specific tasks	No Evidence	The portfolio shows efforts at meeting this standard.	The portfolio shows some evidence of this standard.	The portfolio shows clear evidence of this standard.	The portfolio shows outstanding evidence of this standard.
Critical Thinking, Problem Solving and Decision Making As a student, I use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. *Evidence of Artifacts may include:* • Identify and define problems • Create significant questions for investigation • Plan and manage activities/steps to develop a solution or to complete a project Demonstrate use of tools including calculator, survey, spreadsheet, graphing software, flow charts, and concept maps	No evidence	The portfolio shows efforts at meeting this standard.	The portfolio shows efforts at meeting this standard.	The portfolio shows clear evidence of this standard.	The portfolio shows outstanding evidence of this standard.
Digital Citizenship As a student, I understand human, cultural and societal issues related to technology and practice legal and ethical behavior.	No Evidence	The portfolio shows effort of providing	The portfolio shows some evidence	The portfolio shows clear evidence	The portfolio shows outstanding evidence of examples or

Evidence of Artifacts may include: • Practice appropriate and legal behavior using technology • Cite the work of others • Resect the views, information and opinions of others Demonstrate personal responsibility		examples or reflections of my work.	of examples or reflections of my work.	of examples or reflections of my work.	reflections of my work.
Technology Operations and Concepts As a student, I will demonstrate a sound understanding of technology concepts, systems and operations. *Evidence of Artifacts may include:* • I have strategies to effectively troubleshoot problems. • I can use and decipher which digital application is most effective for what I what to accomplish I can demonstrate how to name, move, paste, convert files and folders.	No Evidence	The portfolio shows I use some digital applications with assistance	The portfolio shows I use some digital applications and equipment.	The portfolio shows I use and troubleshoot most digital applications and equipment.	The portfolio shows I use and troubleshoot digital applications and equipment. I am able to help others.
Attractiveness As a student, I will demonstrate how to create original works that are attractive, organized and contain relevant information.	No evidence	The digital portfolio is distractingly messy or very poorly designed. It is not attractive	The digital portfolio is acceptably attractive, though it may be messy or hard to read.	The digital portfolio is attractive in terms of design, layout and neatness.	The digital portfolio is exceptionally attractive in terms of design, layout, and neatness.

High School ½ Technology Credit

Using 306.42(b)(c) as the base, Ellis School's technology plan requires the local school board shall provide opportunities for students to demonstrate the ICT competency by the end of 8th grade using assessment rubrics applied to the contents of digital portfolios as required in (a)(5) above. Students who successfully demonstrate knowledge, skills, and understanding of these competencies shall have the opportunity, as high school students, to take higher level computer course to meet the ½ credit requirement and (c) the local school board shall provide opportunities for students to complete a ½ credit ICT course prior to high school graduation, including, but not limited to: (1) use of common productivity and web-based software; (2) use of a variety of multimedia software and equipment; and (3) configuring computers and basic network configurations, as follows:

Most students who graduate from Ellis school will continue their education at Sanborn Regional High School in Kingston, NH. This high school is governed by School Administrative Unit #17 and this portion of the 306.42 requirements would be subsumed under their Technology Plan. At the present time, Sanborn Regional High School requires 1 full credit of technology for graduation. Their course catalog offers selections such as Technology in the 21st Century and Digital Portfolio, as well as a variety of programs in Desktop Publishing, Web Page Design, and various applications.

Utilizing Technology Skills in the Traditional Classroom

Using 306.42(b)(2c) as the base, Ellis School's technology plan requires an integrated approach to the use of 21st century tools within all curriculum areas through the adoption of an information and communication technologies literacy (ICT) program in grades K – 12 that provides opportunities at developmentally appropriate levels for students to Become proficient in the use of 21st century tools to access, manage, integrate, evaluate, and create information within the context of the core subjects of: a. Reading; b. Mathematics; c. English, and language arts; d. Science, e. Social studies, including civics, government, economics, history and geography; f. Arts, on utilizing technology in the classroom is as follows:

Students are taught technology skills in the computer classroom, and also have the ability to utilize computer skills and technology in their traditional classrooms as well. All classrooms are equipped with two or three stations (desktop computers, or thin client virtual desktops), and overhead projectors. Overhead projectors allow for students to see concepts from the teacher's computer on a large screen that is visible throughout the classroom. This can allow for the entire class to see one resource that might not have been visible or usable without the use of the projector. In two middle school classrooms Smartboards are currently used to enhance the Everyday Math program. Utilizing these Smartboards to allow for teachers to save notes for students to review and use later, project and write on worksheets that are the same as the students, and various other education enhancements to provide better learning opportunities for students.

Each of the 6th, 7th and 8th grades has at least one classroom lab. These classrooms are equipped with approximately 20 thin client virtual desktops. Labs are arranged so that each student has their own individual work station. By providing students with individual work stations students have the ability to use the computer independently and can explore and create their own products that directly relate to the core class curricula. Students utilize different writing programs and applications, ranging from Microsoft Word to Wikispaces. Students can access documents from historic events or watch video of a hazardous experiment – neither of which might be possible in a traditional classroom. Other resources that are utilized are on-line classroom services such as Moodle, which allows for a classroom to run on location or off. Utilizing programs such as Moodle allow students to have access to resources and information even when students are not at school.

Programs Used to Teach Technology Literacy and Core Curricula

The resources employed by Ellis School vary by grade level and subject. They also vary as technology evolves. A few programs that are regularly used:

- Microsoft Office Programs such as; Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Publisher (used by all grades and subjects)
- Waterford Program (to foster beginning literacy, used in K-1st grade)
- IXL (A math practice site for virtual learning, used in 8th grade)
- Creative Programs such as; Glogster, Paint, Kid Pix 3D (used across all grade levels as appropriate)

- Discovery Education Streaming (used by all classes and subjects to provide supplementary materials such as videos, photos, and sound clips)
- Moodle (used in the middle school by core classes as well as unified arts teachers)
- Audacity – (used to supplement text books and novels, especially for identified students)
- Typing Program- TypingPal (used in the elementary grades in Computer class)
- Animoto and Prezi (used for presenting materials in several classes in the middle school)

This list is in no way exhaustive, but a selection of the way in which technology enhances the educational process here at Ellis School.