

DISTRICT TECHNOLOGY PLAN 2015-2018
INDEPENDENT SCHOOL DISTRICT 308
NEVIS, MINNESOTA 56467

I. Organization

- A. The organization-wide sponsor for this district's technology program is a combination of leadership positions of superintendent and technology coordinator. While the superintendent communicates and receives school board and community input, the technology coordinator communicates and corresponds with the superintendent and district wide staff, making the circuit of information-sharing complete.
- B. Nevis is a K-12 school with a student population of 588 housed within a single building
- C. Although there are no other organizations involved in developing the technology plan, the community has a great interest in its use. The Technology Plan is made available to the public. The residents of the Nevis School District and the public at large have an interest in its use and development.

II. Technology Planning Steering Committee

- A. The District 308 Technology Planning and Steering Committee is made up of Superintendent, Principal, Technology Coordinator, Media Specialist, elementary teacher representative, secondary teacher representative, Community Education Director, computer-applications instructor, School Board member and classified staff representative.
- B. The Technology Coordinator purchases, implements, and manages the technology, however the Technology Committee provides the direction and vision for progress and formulates and develops strategies for the technology plan.
- C. The Technology Plan will be revised again the Fall of 2018. At each October Technology meeting, the plan will be reviewed to determine where Nevis is and where it needs to be. This process will continue through the summer and conclude with a report to the Nevis School Board in October.

III. Mission and Vision

- A. The mission of Independent School District #308 is to provide an educational environment, which emphasizes independent learning as a life long process of challenges that all learners will:
 - 1. Become Critical Thinkers.
 - 2. Develop Positive Self-esteem.
 - 3. Reach their Maximum learning.
 - 4. Adapt to a Changing World.
 - 5. Become Responsible Citizens.
- B. The vision of the District 308 technology program is to provide an environment in which all individuals in the district are empowered to become life-long learners and effective users of information, ideas, and technology.
- C. District 308 has an obligation to prepare learners for the world in which they will live out their lives.
- D. Technology:
 - 1. Is vital to our existence now and in the future.
 - 2. Is no longer an option, but a way of life.
 - 3. Helps learners become active learners.
 - 4. Will never be static; change is continual and constant.
 - 5. Is more than computers.
 - 6. Is recognized as a major work force skill by the US Dept. of Labor in the SCANS Report. (Secretary's Commission on Achieving Necessary Skills)

IV. Objectives

- A. It shall be the objective of the District 308 Technology Committee to:
 - 1. Explore and develop ways to integrate technology into the curriculum, especially as the curriculum is set in relation to current Minnesota academic standards.
 - 2. Fully utilize the network system currently in place in the Nevis K-12 facility and to assure that the system is user friendly, secure and comprehensive enough to be of maximum value to students, staff and community
 - 3. Aid students to become aware of the Internet as an important resource area and also aid students to become familiar and adept with the use of technology.
 - 4. Use all aspects of Nevis district technological innovations as resources for student and community learning.
 - 5. Have ongoing staff development activities available. This would include ways of encouraging the district school board to commit time for such activities. Improving the technology skills of the staff (esp. teaching staff) needs to be a top priority.
 - 6. Continue to study ways to encourage staff to use current programs and to implement a strategy to improve communications with parents.
- B. The goal of these objectives would be to train students to use the technology efficiently and effectively in acquiring and dispersing information according to section III.
- C. The technological innovations for District 308, as described above, shall serve to benefit staff, student, and community by providing a wide range of available resources for learning, working collaboratively, time-on-task reduction, reduction in the use of the Earth's natural resources, improve quality of workmanship and reduce overall costs.

V. Needs Assessment

- A. Participant populations would include students, staff, administration, general public, and Community Education members, and parents that wish to connect to the school records online.
- B. These assessments were gathered through the discussions of the Technology Committee and from discussions with various staff.
- C. Demographics:

1. Nevis is a K-12 school with a student population of approximately 588 housed within a single building. Nevis Public School is located in the city of Nevis just 12 miles east of Park Rapids Area Schools and 16 miles west of Walker-Hackensack-Akeley Area Schools. The district itself is approximately 10 miles east to west and 35 miles north to south.
 2. The Free and Reduced Meals qualification ratio is approximately 50-55%
 3. Nevis receives approximately 50% of its student population through open enrollment.
- D. Requirements:
1. Students must be able to access their work information from anywhere in the building and increasingly from anyplace in the world. Users of laptops and mobile devices must also be able to access their work information from the network.
 2. Therefore, all computers accessible to staff and students must be operable with the networked system while being properly monitored and controlled. Also the wireless network system must be sufficiently robust to handle current and future levels of network traffic from mobile devices.
 3. Students need to be familiar with and introduced to common business practices of the "real world"; therefore, technology similar to what is being used in the "real world" needs to be utilized.
 4. Technology should be used to reduce consumption of natural resources such as paper.
 5. State testing is moving toward annual testing online.
 6. New instruction and text books are being made available online.
 7. Staff and student use of the Internet and stand-alone programs for maximum instructional value must be established and maintained.
 8. The integration of technology must align with the curriculum established for meeting Minnesota academic standards.
 9. Grades, assignments, attendance, curriculum and other relevant information need to be available to parents electronically.
- E. Evaluations:
1. Surveys are the primary means for evaluating technology needs.
 2. The Technology Committee will present a questionnaire to staff to evaluate the benefits of technology in the district.
 3. The Technology Committee will attempt to establish a baseline of technology usage in the fall of the school year by polling the teachers in their technology requirements for student assignments.
 4. This polling will be done again in the spring. The tabulated results will be presented to the technology committee.
 5. A survey of students response to the technology and changes needed will be done in the spring.
 6. Documentation of special technology related projects occurs as needed; for instances digital art projects, journalism projects, the annual, etc.
 7. Surveys in the use of the tablet will be made
 - a 1st week survey of 6th grade class of internet access and usage.
 - b repeated the 16th week and 32nd week
 - c Mid-year survey of teachers as to seen benefits of tablet.
 - d A questionnaire mid-year to assess tablet usage and its progress.
 8. Documentation from the principal's assessment of teachers for classroom technology use will be sought.
 9. Documentation from the Media specialist surveys which are presented annually to 8th grade class will be sought..
 10. Documentation from questionnaires made by the technology coordinator for requests and interest in available or new technologies (such as the Smartboard)
 11. The Nevis School Board reviews goals for technology and outcomes from technology.
- F. See Appendix XVI

VI. Strategies

- A. Provide access to district media center resources in all classrooms or student study areas. Expansion of this concept would be access to regional Library resources, college/university research centers and nationwide commercial resources.
1. The media database is available online to all classrooms and to the public by WEB access.
 2. The media center is subscribed to online databases such as ProQuest, EBSCO, and InfoTrac and has made them available to staff and students anyplace in the school.
 3. A reading system has been placed in service to incorporate media resources into a universal online assessment program for students (Accelerated Reader, Study Island). In addition, an online reading literacy program has been instituted for the primary grades.
- B. Incorporate technology into curriculum and instruction.
1. An individualized math assessment program is online. Data is showing that these programs are effective at improving student achievement. (Accelerated Math, Study Island, Khan Academy)
 2. Begin to teach elementary students how to use the Internet as a research tool.
 3. Smartboards and the accompanying projectors have been installed in all classrooms and the remaining classrooms will also receive interactive technologies soon.
 4. Portable laptop lab systems are available anywhere in the school through the use of wireless technology.
 5. Online classes are available to students where classes are otherwise unavailable. Also in use is College in High School
 6. Student progress showing grades, daily assignments, attendance, and other student information is available online. In addition news and announcement of general information is available to parents and the public by the web. Expansion of the Nevis Web site to more departments to increase communication with parents and public is desired.
 7. Technology is constantly updated to ensure that all students will have continued access to these resources. All core switches have been replaced with state of the art switches and now the wireless system will be updated to a more robust system using centralized management of wireless traffic.
 8. The state is now increasingly requiring annual testing to be done online. Therefore in order to be prepared, updated equipment needs to be in place and students must be prepared to work in a world of technology. Using technology must advance to the place of being second nature.
 9. Administration uses data from the MCA, Accelerated Reader, Accelerated Math, Study Island, Explore, PLAN, PSAT, ACT, AccuPLacer, NWEA, STAR and others for curriculum decisions.
- C. Telephones are in every classroom for parent/staff communications.
- D. Establish and update a baseline of the present, available benefit of the district technology systems, including but not limited to:
1. Internet use as resource.
 - a How often is the Internet used as a resource for or by students?
 - b How is the Internet used as a communication tool to parents or the public?
 - c How has the Internet improved communications with outside contacts, support, and resources?
 - d How is Internet access being used to help students become prepared for the technology found in today's business world (such as WEB technologies)?

- e How is the internet improving the student's understanding of the world we live and work in.
- 2. Computer/networking system as used for classroom resource enhancement and office/classroom record transferring and filing.
 - a How many teachers are proficient at student attendance, grading, e-mail communications?
 - b How has computer access and use improved efficiency in student project completion and acquisition of resources by students or staff?
 - c How often is technology used to produce electronic projects and thus increasing efficiency and reducing use of natural resources?
 - d What increased use of library resources can be attributed to technology?
- E. 5 year Technology Plan
 - 1. All regular classrooms in the school currently have Smartboard type technology.
 - a 4 Special-Ed classrooms will have Smartboard technology installed
 - b 2 other classrooms currently have Smartboards:
 - (1) Band room
 - (2) Choir room
 - c Media Center will have Smartboard technology installed
 - 2. In keeping with the goals set by the Nevis School Board, a 1-1 plan with tablets is in place..
 - a Tablets are issued for all students grades K-12
 - (1) I pads for each student K-6
 - (2) Windows type devices for each student 7-12
 - (3) Damages are the responsibility of the student as per school policy.
 - (4) An insurance fee is required of the student upon receiving the tablet.
 - (5) Computer labs are still be required for business and trade classes.
 - (6) Tablets are available for teacher use in addition to their workstation.
 - (7) All tablets will be scheduled for replacement on a rotating schedule of years
 - (8) The type of device will likely change with the rotation.
 - b Purchase textbooks for online or mobile device use.
 - c Make available other resources for online or mobile device use.
 - d Provide online classes for students.
 - 3. Issues that would require addressing:
 - a The wireless system will have to be constantly upgraded to accommodate the additional load of mobile devices.
 - b Staff training would be a major issue.
 - (1) Training would be required to ensure that the use of the technology is a success.
 - (2) Outside help would be needed for staff training.
 - c There is a need to constantly evaluate the benefits and worth of new technology.
 - (1) Is there an improvement in student progress?
 - (2) Is there an improvement in resources and access to those resources?
 - (3) Technology is not just a change of tools for the same methods.
 - d Funding needs to be sought.
 - (1) Levee
 - (2) Grants
 - (3) State aids
 - (4) Budget

VII. Policy and Procedure Development

- A. Policy and procedure development and revision will be an ongoing practice in order to meet the demands of a high tech system.
- B. The district's policies and procedures for technology use should not limit users to the extent that the system becomes "unfriendly" and/or ineffective for the existing and future needs of staff, students and community.
- C. The Acceptable Use Policy is reviewed by the Policy Review Board with recommendations from the Technology Committee. This is also true for Web Publishing, Equal Access, Filtering and issues of quotas and technology access. The Acceptable Use Policy is available at <http://www.nevis.k12.mn.us/handbooks/acceptableusepolicy.pdf>. It is also mentioned in the Student Manual at Section IX Part C.
- D. The Policy Review Board meets every summer. They will cover items such as equitable access, special needs, and appropriate responses to breeches of the Acceptable Use Policy
- E. Funding requires Internet filtering to be in place. Currently a firewall is in place for Internet filtering in accordance with the Acceptable Use Policy and to limit the traffic into the school from outside sources. The content filter currently in use is LightSpeed. This is a software product installed onto a local server connected as a firewall. It also provides anti-virus service.
- F. Copyright issues, legal software, purchasing, and security issues are to be managed by the Technology Coordinator and will maintain records accordingly.
- G. A disaster recovery plan is formulated by the Technology Coordinator and presented to the Technology Committee.
- H. Instances of data intrusion must be constantly investigated and appropriate measures taken.
- I. The curriculum committee meets quarterly and deals with questions of staff education.

VIII. Technology Management

- A. Infrastructure
 - 1. Telecommunications Capacity and Access
 - a The backbone of the network system is a 24 port Cisco 3560 layer 3 switch and a Cisco 2960 layer 2 switch with POE in each of 4 closets and a 1 gb fiber uplink from the Cisco 2960 switches to the Cisco 3560 switch. All other switches, routers, and high priority lines are plugged into these 3 switches.
 - b The typology is Ethernet using Cat5e plenum cabling. Most desktops (98%) have at least a 100mb connection.
 - c There are 58 rooms that are wired for Internet and computer access. This represents 99% of all rooms in the district. All rooms where there are students working are wired.
 - d Additionally, wireless access is available virtually every place in the district. There are in excess of 800 devices accessing the WiFi system.
 - e A series of ever increasing Wireless Access Points are being installed to handle wireless traffic together with a controller to manage wireless traffic and access by wireless devices..

f All computers have access to the Internet. Internet access is controlled by a firewall from SonicWall which blocks all traffic except specifically allowed traffic. All inbound traffic is filtered by a content filter by LightSpeed Systems. This product allows for differentiated filtering based on the category of the user. Additionally, all email is filtered for spam and boundary by RedCondor.

g Nevis ISD308 is served by 100mb dedicated line for Internet access from 702 Communications. 702 Communications carries the contract to provide end to end internet services to the school. They then contract with ACS to provide the actual T-1 lines to the school.

h The telephone system at Nevis is fed by 8 incoming voice lines. The PBX provides for up to 500 extensions with approximately 65 in current use. There are also numerous other data related lines in use. A set of 12 wireless FM communication radios have been purchased to provide emergency communications within the district..

2. Technology Inventory

a Equipment Access for Instruction

b There are approximately 285 workstations in the school district as follows:

Elem Staff computers	26
Elem student computers	72
HS Staff computers	29
HS students computers	85
Admin.computers	20
Servers & Appliances	43
Spares	10+

c There are approximately 725 tablets in the school district as follows:

ipads	400
spare ipads	5 (additional)
Surface RT	300
spare Surface RT	20 (additional)

d This compared with Student and Staff numbers:

Elem Staff	37
Elem Students	310
e HS Staff	28
HS Students	279

f For a breakdown of equipment, see Appendix XVII

3. Technology Platform

a All workstations in the school are a PC \ Windows format. The average age of the computers calculates to 6.4 yrs

4. Replacement Schedule

a The plan for equipment replacement is according to appendix XVII

5. 45 rooms have an LCD projector for a multiuse display.

6. 35 rooms have an interactive whiteboard, all Smartboard brand.

7. Most class rooms have a cable connection to receive programming by cable or satellite and a VCR or DVD player.

8. The network system is comprised of a core using a Layer3 1gb Cisco switch along with 4 layer2 Cisco switches all linked with a 1gb fiber connections. End points are served by a combination of 100mb and gb switches.

9. Telephones are wired to all classroom and offices and work areas.

B. Security

The Technology Committee will provide policy for security plans and assurance for the district. Security actions include but are not limited to:

1. Security audits are performed from time to time. Web sites offer services for this purpose. Internet, email and computer logging is ongoing with log files being checked on a routine basis.

2. It is considered best practice to have a layered security approach. Security from outside intrusion is handled by a firewall, (Sonic Pro100), which is set to prevent all traffic inbound except web access. Security also includes file and folder permissions, IIS6 with security, AD policies, and log files and a LightSpeed content filter to prevent access to known trouble sites. .

3. An Internet Filter is in place and active in compliance with CIPA.

4. All internal computer access is controlled with username and password by Windows Server AD system in combination with file and folder permissions, carefully created logon script files, and Group Policy updates.

5. Administration and student data files are contained in separate volumes with appropriate permissions so as to reduce the possibility of tampering by students.

6. Servers are locked in a mezzanine with access only by staff.

7. The servers are protected from a power outage by a series of UPSs.

8. A Cisco AP Controller manages access by wireless devices.

C. Funding for the technology purchases are provided through:

1. Capital Funds

2. Compensatory Funds

3. E-Rate Funds

4. State technology Funds

5. Other Grants

D. Disaster Recovery

1. Disaster recovery is provided by several means

a All student and staff new or changed data is nightly archived. Six versions of backup are on file.

(1) 1 Day (Hard Drive)

(2) 2 Day (Hard Drive)

(3) 1 Week (Hard Drive)

(4) 2 Week (Hard Drive)

(5) 1 Month (Hard Drive)

(6) 2 Month (on removeable drive stored in safe)

b Additionally, all student and staff data is archived at the end of the school year to a large storage device up to 5 years.

c All email is nightly archived and then stored to a large storage device.

d All system state data is archived on a bi-monthly basis.

2. All external backup devices are held in the school vault
- E. Management
1. All contracts related to technology issues shall be reviewed and recommendations made to the administrator by the Technology Committee. This would include any action to upgrade hardware and software that will affect the total system.
 2. Each year the Technology Coordinator will assess which computers will need updating.
 3. As a general rule, the priorities for upgrading systems will be administration, teachers and staff, departments which require higher technology, high school, elementary.
 4. An effort will be made to recycle and relocate equipment at every opportunity to conserve use of resources, both district and natural resources.
- F. Support
1. Duties of the Technology Coordinator include maintenance, managing updates, E-Rate applications, helps, and other technical needs.
 2. The Technology Coordinator will provide to the district administration an updated copy of a database containing system passwords, inventories, and licenses.

IX. Technology Support Staff and Skills

- A. The Technology Committee will address needs and/or concerns and make recommendations for future purchases and programs.
- B. The Nevis School Board has created one position in terms of technology support (Technology Coordinator). The responsibilities of the Technology Coordinator include leading the Technology Committee, funding, maintenance, managing updates, software and copyright issues, tech support, technology training, and other technical needs.
- C. The Technology Coordinator is encouraged to attend various regional workshop and trade shows. The Technology Coordinator should seek to be certified in his area of expertise and maintain that certification.
- D. Nevis has contracted with Region 1 for support in financial, student records, and lunch programs.
- E. Nevis is a member of PAWN, a cooperative between three school districts for Special Ed support and technologies.
- F. The Technology Coordinator is encouraged to enlist the aid of a student(s) and/or a staff member to help in the assistance of the end user and for security and disaster recovery. If the Technology Coordinator should be absent, these individuals would have some familiarity with the system.

X. School Media Center

- A. Nevis School has a school media center that serves students and teachers of all levels, Pre-K to grade 12.
- B. The media center provides print, audio/video, and online resources for curriculum support. Its media database is online and available to students, staff and public. It also provides student instruction in research skills and the use of online databases such as ProQuest. Equipment used for instruction is also issued to teachers via the Media Center.
- C. The Media Center has implemented a reading system that utilizes many books in combination with an electronic assessment to promote student achievement in reading.
- D. The Media Specialist instructs teachers regarding new instructional technologies during staff workshops and assists them as needed (with the Technology Coordinator) throughout the school year.
- E. The Media Specialist is a member of the Technology Committee
- F. The Nevis School Media Center is a member of the Northwest Service Coop that allows a sharing of many resources. We enjoy a good working relationship with the local branch of our public library system.

XI. Staff Development and Training

- A. Staff workshop days are the primary means of providing professional development in the area of technology.
- B. The secondary means is by the frequent 1 on 1 interaction between the Technology Coordinator and staff through giving assistance and informal training as needed although some formal classes are also provided.
- C. The Media Specialist leads classes for students in resource and technology use.
- D. Opportunities are provided for staff to improve technology skills based on requests made by staff members. Community Education technology classes and staff workshop days become avenues for this training.
- E. Online opportunities will be made available. These will be implemented for the purpose of aiding staff in the integration of technology with instruction. The programs also provide assessments of how well that staff member is progressing.
- F. The Technology Committee will issue a survey to determine training needs of staff after the beginning of the school year. These results will be compared to the goals the Committee has for staff proficiency levels.
- G. Frequent informal sessions between administrative and teaching staff and the Technology Coordinator provide the assessment and training. Informal training also takes place with other staff. In addition, staff is encouraged to take part in other technology training.
- H. Challenges to staff training and assessment include time, scheduling and funding. Typically the Technology Coordinator trains staff through giving assistance and informal training as needed although some formal classes are also provided.

XII. Budget Development and Planning

- A. Challenges
 1. Budget cuts at the state level have forced cutbacks in service. It is not possible to replace all computers on a 7yr timetable. We have resorted to lower cost used or refurbished computers to accomplish the needed upgrades. Also by maintaining an older version of some programs, costs can be held down. E-Rate has been a significant part of the budget, presenting about 20% of the technology budget.
 2. Providing training has been a challenge. Funds that are earmarked for training have instead been used to purchase equipment
- B. The Technology Committee will review all potential grants available to the district for technology. A recommendation will be made to the administration and school board regarding application.
- C. The Technology Coordinator will complete the E-Rate and also any state-provided funding process and inform the Technology Committee of its progress.
- D. The Superintendent will describe yearly to the Technology Committee what revenue is available from State and Federal sources for technology. This would include one-time State and Federal grants, levy utilization for technology, plus capital funds made available for technology purposes.
- E. A significant part of revenue availability will be dependent on legislative action each year and other capital needs of the district.

- F. Presently, the Nevis School District earmarks approximately \$25000 for technology needs, not including any special revenue that can be used for technology, such as one-time grants, and E-Rate funds as described earlier. An additional \$15000 is required for yearly costs such as Region1 support, software subscriptions, internet connection and similar support and subscription items.
- G. Each year the Technology Committee will provide a priority schedule of technology purchases, maintenance, in-service, and related costs for the district. This schedule will be shared with the school board and staff.
- H. The district office will supply monthly financial reports to the Technology Committee. These reports will identify all technology-related expenditures and revenues. The Technology Committee will monitor these expenditures and respect the confines of the budget.
- I. Technology costs typically are used as follows:
 - 1. Hardware purchases 65%
 - 2. Maintenance 10%
 - 3. Software 25%
 - 4. Staff training falls under different budget
 - 5. Software service contracts falls under different budget
 - 6. Internet connection falls under different budget

XIII. Action Plan

- A. Nevis School District has implemented a tablet initiative. All students K-6 have an ipad to use and all students 7-12 have a Surface RT issued.
- B. Implementation of 1-1 plan does not eliminate the need for a computer lab. Courses designed to support item C below require that computer labs be present and current.
- C. Software needs to be updated in keeping with standard business practices of the day so that students are at least familiar with reasonably current technologies. However new software and technologies will not be implemented for the sake of being current or new, but rather for the benefit of training the students to be able to operate in an ever changing world of technology.
- D. The Technology Committee will issue a survey to determine training needs of staff after the beginning of the school year. These results will be compared to the goals the Committee has for staff proficiency levels.
- E. One goal of technology progress is to lessen the use of natural resources (such as paper).
- F. The District 308 Technology Committee will adhere to the following schedule of activities:
 - 1. August - Review summer technology projects and set in-service offerings for staff, students, and community. Examine budget for new school year and set priorities of district technology program, including timelines, maintenance, and staff in-service costs.
 - 2. Sept-May (Monthly meetings) - Review progress of training program(s) and budget. Study current and future technology needs of the district. Make recommendations to administration and school board.
 - 3. Feb - Review 5 year plan for technology
 - 4. March - Plan areas of needed technology change or improvement
 - 5. April - Review the past school year technology implementation and effectiveness. Finalize what purchases need to be made.
 - 6. May -
 - 7. June -

XIV. Evaluation and Benefit Analysis

- A. Evaluation (Current Status 2014)
 - 1. We have approximately 285 workstations of which 205 are for student use.
 - 2. The new technologies are making it possible more than ever to move forward with a practical implementation of the 1-1 program in the form of the new tablets. Chrome books also are very promising with a low price point.
 - 3. Additions or upgrading of the network system have been to enhance the current system. A state of the art wireless system is installed and functioning well
 - 4. Operating systems are being used district wide as much as possible.
 - 5. In order to reduce budget demands, refurbished computers are relied on heavily as computers are updated.
- B. Evaluations
 - 1. The Technology Committee will evaluate the benefits of technology in the district with questionnaires and surveys made to staff. The surveys need to be accomplished by April so that the goals of the surveys can be achieved.
 - 2. The goals of these surveys are:
 - a Assess students' progress in the use of technology.
 - b Use technology to help students meet the Minnesota Standards.
 - c Determine where the most critical needs for technology improvement are.
 - d Determine what areas of technology improvements are needed.
 - 3. Primary targets of surveys will include:
 - a Staff
 - b Junior and Senior Classes
 - c Parents
 - 4. The Nevis School Board has the primary responsibility for evaluating the benefits and progress of technology. The Nevis School Board will be reviewing goals for technology and outcomes from technology.

XV. Closing

- A. Technology offers unprecedented opportunities for educators to provide motivational, dynamic instruction that is more student-directed than ever before. Learning can be easily integrated. Students of all ages can have vicarious experiences that would be otherwise impossible. Educators can facilitate learning more effectively and aid students towards progress in the world of technology in which we live.

XVI. Appendix XVI

A. The following chart is based on observations by the Technology Committee and Coordinator, not by survey, questionnaire, or research data.

Objective	Stakeholder	Benchmark	Current Position	Future Position
Improve student use of Internet as a resource.	Students and parents	How many students use Internet as a documented resource in reports?	75% of grades 10-12 use the internet as a resource for at least 50% of reports and research papers. Less for lower grades.	All students use Internet as a resource on at least 50% of reports and research papers
All staff be comfortable with online activity (e-mail, Internet business, research)	Staff and Administration	How many and how often do teaching or Admin. staff engage in online activity?	Less than 50% of staff will use or take part in online activity	100% of staff will take part in online activity.
Increase use of technology and online activity for Administration.	Administration, Staff, and Parents	What percentage of assignments, reports, communications, and records are accomplished electronically?	Usage has been reduced by 15% per year from a peak usage in 2005	Reduce paper consumption by 75%.
Use online training, video course content or other video streaming products.	Staff and Administration	How many and how often do teaching or Admin. staff engage in online activity?	Approximately 25% of staff use or take part in video streaming	Video Streaming will be a major method for acquiring video footage for classroom use.

XVII. Appendix XVII

A. Summary listing of types of equipment, age, and status

Type of Equipment	Description of use	Date of Purchase or version	How many	Replacement Cycle	Current Age or Status Age ((last year of
	HARDWARE				
Dell R710 server	Server hosting VM servers	7/13	1	10 yrs	4 (2011)
Dell 2950 server	Server hosting VM servers	7/11	1	10 yrs	7 (2007)
Dell 2650 server	Server hosting backup	7/07 used	1	10 yrs	11 (2003)
Dell 2850 server	Server hosting backup	7/08 used	1	10 yrs	9 (2005)
IBM X345 Server	Server hosting backup	7/07 used	1	10 yrs	10 (2004)
Norco Box	Backup Storage Unit	7/07 new	1	10 yrs	7 (2007)
Dell Equinox NAS PS5000e	NAS Data Storage Unit 10tb	7/14	1	10 yrs	6 (2008)
Tandberg DPS2000	NAS Data Storage Unit 2tb	7/12	1	10 yrs	4 (2010)
Dell Optiplex Desktop 9020	Student Use	8/14 new	25	8 yrs	1 (2014)
Dell Latitude D630 laptop	Staff Use	8/11 used	3	6 yrs	3 (2007)
Dell Latitude D 620 laptop	Staff Use	8/10 used	2	6 yrs	3 (2006)
Dell Optiplex Tower 755	Staff Use	8/11 used	17	8 yrs	3 (2007)
Dell Optiplex Desktop 755	Staff Use	8/11 used	17	8 yrs	3 (2007)
Dell Optiplex Desktop 760	Staff Use	8/10 used	29	6 yrs	4 (2009)
Dell gx620u	Student Use	4/09 used	6	8 yrs	6 (2005)
Dell gx620d	Staff Use	8/09 used	6	8 yrs	6 (2005)
Gateway pf5.5 17"	Student Use	7/10 used	47	8 yrs	5 (2004)
Dell Latitude D 610 laptop	Student Use	8/08 used	35	6 yrs	7 (2005)
Gateway pf5.5 15"	Student Use	7/05 new	5	8 yrs	7 (2004)
Gateway pf5	Student Use	3/04 new	50	8 yrs	8 (2003)
P51 Compaq	Student Use	7/06 used (ms)	28	7 yrs	9 (2003)
	Printers				
HP DJ430	CAD printer	1998	1	8	13
HP 4300 laser	Staff/Student Use	2010 used	4		7
HP 4100 Laser	Staff/Student Use	2001 new	2		10
HP P2035 laser	Staff/Student Use	2014 refurb	10	10 yrs	
HP940 Printers	Staff/Student Use	2001 new	2	8 yrs	13
HP 2100 Laser	Staff/Student Use	2007/2011 used	6	10 yrs	12-15
HP 1200 Laser	Staff/Student Use	2002	4	10 yrs	9
HP 1300 Laser	Staff/Student Use	2004	2		7
HP 1320 Laser	Staff/Student Use	2006	5		5

Brother Laser	Staff/Student Use	2005	4		6
Xerox color Printer	Admin use	2013	1		2
Projectors & SmartBoard					
Epson PL460 Projector	Ceiling mount	07/10 new	5	7 yrs	5
NEC NPU300 Projector	Ceiling mount	07/11 new	1	7 yrs	4
Epson PL82 Projector	Ceiling mount	02/06 new	1	7 yrs	9
Epson PL83 Projectors	Ceiling mount	8/08 new	9	7 yrs	7
Epson PL84 Projectors	Ceiling mount	8/10 new	15	7 yrs	5
Epson PL95 Projectors	Ceiling mount	8/11 new	5	7 yrs	4
3m Projectors	Ceiling mount	12/07 used	2	7 yrs	12
Interactive White Boards	Wall mount Smart	8/08 new	5	10	7
Interactive White Boards	Wall mount Smart	8/09 new	7	10	6
Interactive White Boards	Wall mount Smart	8/10 new	9	10	5
Interactive White Boards	Wall mount Smart	8/11 new	9	10	4
Interactive White Boards	Wall mount Smart	8/12 new	5	10	3
Digital Camcorders	Media Center Checkout		2	3 yrs	1-3
Adobe Photoshop EL	Student Use	v3	55	6yrs	8
Adobe Premiere EL	Digital Arts	V9	20		
Adobe Premiere EL	Digital Arts	V7	10		
Adobe Premiere EL	Digital Arts	V3	20		
AutoCad	CAD Class	V2006	30	3 yrs	
Chief Architect	CAD Class	V XI	30	3 yrs	
Dreamweaver	WEB/Technology classes	V11	5	6yrs	
QSP	Lunch Program		2		Annual
Synergy	Student Records		Web	1 yrs	Annual
Synergy	Grade Books		Web	1 yrs	Annual
SmartHR/SmartFin	Financial Records		Off Site	1 yrs	Annual
NETWORK					
Internet Connection	Data		6000		
Cisco Firewall	100mb Router/ firewall/ Filter				
Network drops	10mb, some 100mb Tested		300		
AirPro Wireless Link	Bridge to Remote site	2009 used	2		
Cisco 2610 AP	Wireless access	2013 new	25		
Cisco 1231 AP	Wireless access	2006 new	5		
100mb Switch	Switching Hub 5 port		15		
3com 3300 100mb Switch	Switching Hub 24 port	1996	14		
Cisco 2560 L2 Switch	Core Switches	2012 new	4		
Cisco 3560 L3 Switch	Core router	2012 new	1		
OTHER Equipment					
APC 1000	Server UPS	1998	1		
APC 1000	Server UPS	2003	3		
APC 1000	Server UPS	2004	1		
APC 1000	Server UPS	2005	1		
APC 1500	Server UPS	2006	1		
SOFTWARE					
VMWare Guest	Admin. Use	Server 2012	6		
VMWare Guest	Admin. Use	Server 2008	6		
Microsoft Server	Server and Network Operating System	V2008,2012	12		
Microsoft Office - or Components	Admin. Use Staff/Student Use	V2010	Dist license		
Adobe Photoshop EL	Student Use	v3	55	6yrs	8
Adobe Premiere EL	Digital Arts	V9	20		
Adobe Premiere EL	Digital Arts	V7	10		

TECHNOLOGY INFRASTRUCTURE, MANAGEMENT AND SUPPORT QUESTIONS FOR SCHOOL DISTRICTS, CHARTER SCHOOLS AND NONPUBLIC SCHOOLS

Please describe plans for technology implementation based on responses to the following questions. Think about these questions in terms of a planning context. For example, where are you now in terms of telecommunications/Internet connectivity and where do you need or want to be at the end of the planning cycle? The table can be expanded as needed to provide complete information.

QUESTION	RESPONSE
What is your telecommunications/Internet connectivity capacity in your school district or school for Internet access and video connectivity?	Currently we have 100mb internet access with none devoted to video connectivity. In addition a cache box is installed to cache some heavy repetitive downloads.
Do you have plans to expand this capacity within the next three to four years?	yes
If you plan to expand telecommunications capacity, what will be your anticipated capacity by the end of this planning period (July 1, 2013)?	200mb
What is your student to Internet-connected computer ratio? What will this ratio be at the end of the planning cycle?	The ratio is approximately 1 to1. We have an ipad for every elementary student and a surface tablet for every highschool student. In addition, we still have our labs in use, media center computers, 2 laptop carts and several classrooms with workstations for students
What is your teacher to Internet-connected computer ratio? What will this ratio be at the end of the planning cycle?	Ratio for teachers is 1-1 although many paras and aids must use student computers or teacher stations for their access.
Are the majority of the computers accessible for students located within labs or classrooms?	Apart from the tablets, approximately 4/5 of student workstations are in labs or mobile labs. We have 3 labs plus 2 laptop carts from the Media Center.
What is the average age of computer equipment used for instruction?	8 yrs on workstations. 1-2 yrs on tablets
What is timeline for your computer equipment replacement cycle?	8yrs. Much of this equipment is replaced with used and therefore on a shorter replacement cycle. 5-6 yrs on tablets
What is your computer platform? PC-based, MacIntosh-based or both?	PC
How many technology support staff do you have to manage your technology infrastructure and network?	1
Is the technology support staff sufficient to effectively manage your technology infrastructure and network? If not, what staff capacity do you think you need?	Currently it is barely sufficient. We plan to make use of student help. Especially as we move to tablet use, student help will be important..
Is assistive technology for students with special needs provided and supported in your school district or school?	Assistive technology is supplied and determined by PAWN, a cooperative association composed of three districts.
Are technology support staff provided with the necessary training they need, including training associated with assistive technology?	yes
How and when are technology support staff provided with training?	Occasional seminars, investigative research and books
What particular challenges does your school district or school face in providing sufficient access and technology resources to your staff and students?	Funding is a particular large challenge just as it is with most school districts. The amount allotted for technology has stayed essentially the same for 12 yrs. Also, the district's 7th attempt to pass a bond has failed.