

## Appendix A: Nemaha Valley High School Available Technology

- Library Lab -The library lab has 21 computers that are used for technology integration primarily by FACS, Language Arts, Math, Science and Social Science. This lab is available for use by any class. This lab has a networked laser printer and access to 2 networked designjet color printers.
- Business Lab - The business lab was originally configured with 20 computers plus teacher workstation. During the summer of 2007, 4 additional computers were added to accommodate larger class sizes. This lab has access to a networked laser printer and a networked designjet color printer.
- IT Lab - The IT Lab is configured with 20 computers and is used for technology integration primarily by Art, Auto Mechanics, Production Trades. Like the Library lab, this lab is available for use by any class. Due to scheduling conflicts for the 2007-2008 school year, the Computer Applications II class uses this lab during block 3.
- Library - The library has 5 student PCs, and 2 student MACs that are primarily used for independent student usage. These computers also provide an overflow area for library lab usage. The library has 2 computers dedicated to library functions. The technology coordinator's workstation is also located in the library. The student computers in the library have access to the networked laser printer in the library lab and the 2 networked designjet color printers in the library. The library aide's workstation has a designjet printer. The technology coordinator has a networked laser printer.
- Upper Math lab - Mrs. Meyer's classroom has 8 student computers plus the teacher workstation. These computers are used for technology integration in the upper Math classes and available for individual student usage.
- Upper Science lab - Mr. Philbrick's classroom has 9 student computers and a teacher workstation. These computers are used for technology integration in Chemistry, Physics and Advanced General Science. Vernier data probes and Lego Mindstorms robotics kits are utilized with these computers. These computers are available for individual student usage during seminar.
- Teacher Workstations - All teachers have a desktop PC and laser printer. The printer is a networked printer in classrooms with multiple student computers. Classrooms are also equipped with a TV and VCR. Most classrooms also have a DVD player. Projectors have been added to 7 classrooms with 5 of them connected to a laptop computer.
- Automotive lab - The auto mechanics department has a PC with wireless Internet access in addition to the classroom computer. Digital handheld tools are incorporated into the laboratory work.
- Office / Administration - All personnel have access to a PC and a laser printer. The principal has a laptop computer.
- Food service - One computer in the office is dedicated to the food service program. This computer has access to a networked laser printer in the office. Additionally, we currently have one PC dedicated to food service management in our teacher's workroom. This workstation has access to a networked laser printer in the workroom. The lunchroom management workstation will move to the grade school when the new building is completed.
- Custodial Service -The custodian's office has a laptop computer for management of the HVAC system. This laptop has Internet access.
- Physical Education: The PE department has a Tri-Fit machine and PE management software as part of a grant administered by our School to Work Consortium.
- Graphing Calculators: Graphing calculators are provided by the school for students in upper math classes. The older calculators have been rotated to Mr. Thomas and Mr. Philbrick for use by their students. This has allowed all students enrolled in Physics and Chemistry to have a calculator. Mr. Thomas has a classroom set of calculators for use by his students. In addition to integration in the math classes, the calculators are used for data collection and manipulation of data.

## Appendix A: Nemaha Valley High School Available Technology

- Distance Learning: The high school has a classroom equipped for distance learning over the Greenbush and KAN-ED networks. In addition, the room has a laptop computer for instruction and a teacher workstation.
- Rotation of Computers: Newly purchased computers are placed in the high usage areas, rotating the computers from those areas to areas of lesser usage. We strive to keep the computers in the business lab as current as possible. We strive to keep the computers in the business lab as current as possible. Our goal for the building is to try to keep computers from getting older than 5 years **old**. When rotating computers, the ages, condition, and capability of the existing computers in each area are used to determine how the computers are rotated.
- Printers: Printer usage is evaluated annually to determine need for updating. When printers are rotated, the age, condition and capability of the printer in relation to the need is considered to determine the rotation.

### Network Infrastructure -- Nemaha Valley High School

- Wide Area Network (WAN) - Fiber optic cable connects the high school to the grade school building at 709 Nemaha. Prior to the fire, this cable was utilized to deliver distance learning programming from the high school to the grade school. Since the fire, this cabling is also being used to connect the junior high classrooms to the grade school network.
- LAN -- The two facilities maintain independent local area networks (LANs).
- Wiring: The high school has 4 'wiring closets' equipped with HP 4100 switches. Fiber optic cable connects the East library switch with the IT lab switch. Cat 5e and 6 cabling is used to connect these 'wiring closets' to classrooms and offices. Each classroom has 2 wiring drops. Currently, the PE offices have one drop and are connected to the network with Cat5 cabling thru the gym to a hub in the custodian's office. That hub is connected via CAT5 cable to the West library switch.
- Wireless: The high school has Linksys Wireless Access points in the office, library, math classroom, custodian's office, IT lab and auto office. These access points use MAC address filtering for security.
- Switches/Hubs - The business lab and library lab have 24 port managed switches. The math lab, IT lab, science lab, and special education classroom have unmanaged switches. Unmanaged switches and hubs will be rotated out of service.
- Servers: The high school network utilizes Novell, Linux and Windows on its servers. The server operating system is determined by need, cost and capability.
  - The HPML350 server runs Netware 6.5 and is primarily used for file storage and network management. It also serves as the 'imaging' server to create and distribute workstation images. [Processors - 2 Intel Xeon CPU 3.20 GHz; RAM - 4 GB; Volumes: Sys - 8 GB (9% free); Data1 - 34 GB (20% free); Data - 93 GB (76% free on 11/26/2007)]
  - The Lib330 server is a donated Dell Precision 330 running Netware 6.0. This server is dedicated to running Winnebago Spectrum, the library software. The post office for the high school students is located on this server. Prior to the summer of 2007, a Gateway 7400 server was used for this function and also the network printing. However, during the summer of 2007, the Gateway 7400 server hard drive crashed. Thus, it was replaced with the donated hardware. [Processor - Intel Pentium 4 CPU 1700MHz; RAM - 512 MB; Volumes: Sys - 8 GB (83% free); Data 1 - 9 GB (98% free)]
  - The Gateway 7400 server runs Netware 6, Groupwise 6.5 and WebAccess. This server provides e-mail services for the entire district. The post office for the district staff is located on this server. [Processor - Intel Pentium III 933 MHz; RAM - 1 GB; Volumes: Sys - 4.7 GB (44% free); Mail1 - 3.5 GB (23% free); Mail2 - 8.6 GB (80% Free)]
  - The Gateway 930 server runs Netware 6 and BorderManger 3.8. This server is a proxy server running Surf Control filtering software. One of the drives on this server stores the yearbook files. Another drive is used for storage of software installation files. [Processor - Intel Pentium III 1130 MHz; RAM - 3 GB; Volumes: Sys - 8 GB (28% free);

## Appendix A: Nemaha Valley High School Available Technology

Cache - 2.5 GB (26% free) Cache1 - 8.7 GB (47% Free); Cache2 - 8.7 GB (52% free); Admin - 9 GB (4% free); Data1 - 17 GB (49% free); Data 3 - 16 GB (24% Free)]

- The Dell PowerEdge 300SC computer is running Windows 2000 and IIS. This server hosts the nvschools.org web site. This computer was originally purchased as part of a grant for the computer maintenance class. When the old web server failed, this computer was utilized since the class was not being taught at the time. [Processor - x86; Ram - 256 MB; Volume - 3 GB]
- The Nobilis server functions as the LAN firewall and runs the IPCop distribution of Linux.
- The DakTek computer runs Windows 2003 and hosts the United Streaming network management software. This computer was originally purchased as part of a grant for the computer maintenance program. When the need for a United Streaming server developed, it was utilized since the class was not being taught at the time. [ C drive - 18.6 GB, E drive - 111 GB, 128 MB RAM, Intel Pentium 4 1300 MHz processor]
- A Dell GX280 computer hosts Moodle (classroom management software) on a SUSE Linux distribution. This computer was rotated out of a lab to replace a 6 year old workstation originally configured for this purpose.
- The HP M310 server runs Windows 2003 and hosts the WinSchool student management system. [Processor - Pentium 4 3.2 GHz' RAM - 2 GB; C Drive - 148 GB]
- A Dell computer running Windows 2000 hosts the weather reporting software
- Internet access is obtained from AT&T (SBC Internet) via KAN-ED router and T1 lines.

### Backup - Nemaha Valley High School

- Zip drives are used to backup the Moodle data, food service data and high school financial records.
- Tape drives are used to backup the faculty and student files on the HPML350 server and the Winschool files.
- A firewire drive is used for backup of data from WinSchool, KIDS, Passkey, AR, Winnebago Spectrum, PE Manager, and all student files, staff files, office files and yearbook pages using Second Backup software on a Dell GX280 computer. A DVD is created monthly from these backups for off-site storage.
- Flickr is used for backup of the digital photographs for the yearbook.

### Software - Nemaha Valley High School

- The purchase of software will be analyzed annually by the technology coordinator in an effort to stay current, legal (licensing) and in compliance with state standards. Software selection criteria will include available funding, cost, ease of use and alignment to the curriculum. Teacher suggestions, software demonstrations and staff discussions will be used in making purchasing decisions. The high school's software budget is determined by district educational needs annually.
- Licensing will be analyzed annually in an effort to maintain compliance with software licenses. Whenever possible, network licenses will be purchased. Microsoft Windows XP is the operating system on most computers in the building. This OS will be phased out as new computers are purchased. The selection of an operating system will be based on ability to function in current networking environment and cost.
- Microsoft Office is the integrated software package selected for use in all areas. Open Office is also provided in order to expose students to free integrated software.
- Educational software needs will be assessed annually. Purchasing decisions will be based on available funds, cost, ease of use, alignment to curriculum and willingness of teaching staff to integrate software into the curriculum.

## Appendix A: Nemaha Valley High School Available Technology

- NVHS utilizes Computer Associates eTrust Integrated Threat Management to screen for viruses and spyware. The management portion of this package runs on the same computer that performs the data backups to the firewire drive.
- NVHS utilizes the Novell products Netware, ZenWorks, Groupwise and BorderManager for the network operating system and network management. An annual subscription to Novell's subscription library is maintained to provide technical support. Updates to the Novell servers are usually applied during the summer. Critical updates may be applied as deemed necessary. The Windows and Linux servers are configured to download and install updates automatically.
- The library management software is Winnebago Spectrum. This software is no longer being updated and will need replaced in the near future.
- WinSchool is used for student management, including scheduling, records and electronic grades. As part of the WinSchool package, teachers utilize eGrade for their digital gradebook and have access to eAttendance to report student attendance. A subscription to K12 Planet is maintained to provide students and parents access to student grades via the Internet. Annual technical support is maintained.
- STAR Reading and Accelerated Reading are utilized in the Language Arts curriculum. Passkey is utilized to reinforce learning across the curriculum. Annual technical support contracts are maintained for these software packages.
- SurfControl is currently being used for Internet filtering. Updates are applied on a regular basis. This filtering solution does not filter all computers, nor does it allow for bandwidth monitoring. Due to the increased usage of both wireless connections and high-bandwidth tasks, a new solution will need to be sought.
- Novell's Groupwise and WebAccess is used to provide e-mail to all district staff and the high school student body. Updates are usually applied during the summer. However, critical updates will be applied as deemed necessary.

### Peripherals -- Nemaha Valley High School

- Cameras -The yearbook staff has 3 digital cameras for use by staff photographers. The library has 2 digital cameras and one digital video camera for use by students and staff. The office has 1 digital camera. An analysis is made annually to determine if there is a need to replace a camera or add additional camera(s).
- Scanners - The business lab, library lab, IT lab and library each have access to at least one scanner. Scanners are analyzed annually to determine if an update is needed. Scanner updates are usually driven by upgrades in the computer operator system.
- Projectors - Projectors have been placed in the following classrooms: Mrs. Enneking, Mr. Hermreck, Mrs. Baker, Mr. Thomas, Mr. Philbrick, Mr. Wertenberger and Mr. Stanley. The building administrator will determine the distribution of additional projectors based on available funding and proven need for curricular integration. Due to the age of some of the projectors, we will need to begin analyzing the need for replacement annually.
- Graphing Calculators
- Science Probes
- Auto Mechanics Handheld Digital Tools --