

# AuSable Valley Central School District



Technology Plan  
July 1, 2015 – June 30, 2018

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## Vision, Goals and Objectives

### **Vision**

AVCS will collaborate with all stakeholder groups to develop, implement, maintain and evaluate an educational technology framework that provides students, teachers, administrators, parents and other members of the community with the resources needed to support technological growth.

### **Goals**

1. Every student will be required to receive instruction in the use of learning technologies in alignment with the New York Standards (NYS) in Technology, NYS MST Standards, Local Standards or National Education Technology Standards for students (ISTE/NETS).

[www.iste.org/AM/Template.cfm?Section=NETS](http://www.iste.org/AM/Template.cfm?Section=NETS)

[www.emsc.nysed.gov/technology/initiatives/ISTEs.html](http://www.emsc.nysed.gov/technology/initiatives/ISTEs.html)

[www.emsc.nysed.gov/ciai/mst.html](http://www.emsc.nysed.gov/ciai/mst.html)

[www.emsc.nysed.gov/ciai/mst/](http://www.emsc.nysed.gov/ciai/mst/)

#### Objectives

Elementary Level - Students will be exposed to a variety of learning technologies including basic computer operations as outlined in the ISTE/NETS profiles, NYS MST profiles and/or local profiles for students noted further in the Technology Plan.

Middle School Level - Students will develop proficiency in basic computer operations and be exposed to a variety of learning technologies as outlined in the ISTE/NETS profiles, NYS MST profiles and/or local profiles for students noted further in the Technology Plan.

High School Level - Students will develop proficiency and more advanced computer operations and be exposed to a variety of learning technologies as outlined in the ISTE/NETS profiles, NYS MST profiles and/or local profiles for students noted further in the Technology Plan.

General - Students will be offered a broad variety of courses that incorporate the use of learning technologies.

2. Every student will have the opportunity to use learning technologies to access and analyze information in ways that develop higher order thinking skills, increase their ability to use technology as a tool in solving problems, and support their confident use of the technology skills they will need for success in their future study and employment.

Objective: Each grade level will develop specific assignments that will require the use of learning technologies. Teachers will utilize the NYS Technology Standards, Local Standards, NYS MST Standards and/or the ISTE/NETS when preparing these assignments at each grade level.

3. Every teacher/administrator will participate in technology staff development to support student achievement of ISTE/NETS, NYS MST standards, local standards and/or the NYS Learning Standards in Technology.

Objective:

Technology training will be provided to all staff during Superintendents Conference Days, Early Release days and in-service opportunities.

4. Every teacher/administrator will be technologically literate.  
[http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_T\\_Standards\\_Final.pdf](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T_Standards_Final.pdf)

[http://www.iste.org/Content/NavigationMenu/NETS/ForAdministrators/2009Standards/NETS-A\\_2009.pdf](http://www.iste.org/Content/NavigationMenu/NETS/ForAdministrators/2009Standards/NETS-A_2009.pdf)

Objective:

As of 2010, all newly hired staff will be encouraged to understand and become fluent in the ISTE/NETS, NYS MST Standards, Local and/or NYS Standards in Technology.

Every teacher/administrator will increase their technological literacy by attending in-service opportunities in technology and utilizing technologies on a regular basis.

5. Every teacher/administrator will provide leadership in integrating technology into the curriculum, instruction, and student learning activities; and will have access to technology resources that support them in developing a school climate and culture that results in high student achievement for all groups.

The district will ensure that the resources are available to allow educators to collaborate to develop lessons utilizing technology.

In order to support parents and community members, AVCS will offer technology training as a means of supporting student achievement. Parents will have the opportunity to access web-based information about their children's learning environment and classroom activities that can help them to assist their children with their studies.

## Access for Learners

### **Data Wiring**

All instructional and administrative spaces which require them have been equipped with Category 6 or 6e Unshielded Twisted standard to 622 Megabits per second. Every classroom and administrative workspace is and will continue to be provided a minimum of six network connections, and/or have wireless capability. Fiber riser and backbone connections will be provided to telecommunication closets to replace copper backbone connections and enhance bandwidth. Fiber star topology is the target architecture to connect remote buildings to the district central office for voice, data, and video digital communications.

### **Network Standard**

GigaBit Ethernet or other subsequent standards has been applied in the design of WAN and LAN backbone connections. The objective system requires minimum 100 Megabit per second connections to all nodes using either copper or fiber. The network infrastructure will naturally evolve to higher bandwidth standards as media and supporting equipment become proven and economically feasible. Ultimately, there will be a single, composite signal path for voice, data and video into end terminal equipment

### ***LAN Protocols***

The district will adopt IP/IPV6 and/or other high-bandwidth, quality of service protocols as evolving standards certify them for use and common acceptance drives their price into affordable ranges. The availability of public service facilities will be closely monitored as the area infrastructure evolves to ensure that adequate provisions are made for upgrade of the school district wide area network at minimum cost.

### **District Area Network**

The planning goal for the District Area Network (DAN) is connected via fiber providing connectivity to all schools. The use of wireless full duplex Ethernet has been evaluated to provide DAN connectivity for areas not able to be serviced by fiber and bandwidth demands exceed the limitations of T-1 circuits. Digital lines comprising single or multiple T-1 voice connections will be implemented at the district office site, and through the DAN connectivity will be allocated out to each building in the network. Newer routing technologies, protocols, and higher bandwidths will require upgrades to routing devices, repeaters, hubs, switches, network interface cards and other elements of the network infrastructure.

## **File Services**

The district has and will continue to experience significant changes in its need for server-based resources in the next two to three years. This will be a direct result of the continuing evolution of Microsoft Windows 2008 file services, and the growing demand for data services for streaming media applications, video servers, graphic servers, audio servers, and data sharing services for collaborative applications. Continuing trends toward specialization of server platforms will eventually put high-end servers in place for file services alone.

## **Other Services**

The district will continue to increase the functionality and inherent complexity of its World Wide Web presence using emerging technologies. There will be a high demand for a robust intranet presence with increasing DAN bandwidth in order to provide distance learning opportunities and administrative software applications, including Web-based, back-end database access for student and HR programs. The district will provide continued maintenance of DNS services, including integration with the Microsoft TCP/IP protocol implementations. Similarly, there will be continuing use and upkeep of DHCP or evolving dynamic configuration schemes with ensuing versions of Internet Protocols. New implementations will be required for specialized servers with ever-increasing content demands such as central library databases, security, streaming media servers, and application servers. Productivity software, such as calendars and schedulers will become integrated with voice messaging and teleconferencing applications. Industry migration toward specialized servers will require new server hardware acquisitions. Centralizing the delivery of software applications through the use of Windows Server Group Policies will reduce the resource burden associated with installation and maintenance of software. The District will evaluate and provide assistive devices as identified.

## **Internet Connection**

The district currently utilizes a fiber linked DS3 data link to the NERIC/Charter, and hence to the Internet via NERIC and Applied Theory's T-3 connections. This has eliminated many of the connectivity issues that restricted the effective use of the Internet as a learning resource. This result has been a proliferation of Internet browser software as a standard application for use by students and staff. Such usage increases will necessitate a continuous review of how available bandwidth is being used and what changes need to be made to accommodate the expanding use of technology in the curriculum.

## **Clients**

The district's Educational Technology Department on an ongoing basis will upgrade client workstation inventory to meet current platform standards. These hardware upgrades and evolving standards will ensure that the district keeps pace with industry standards for next generation software applications. Multimedia systems are the minimum platform for instructional use. Portable computers and notebooks will become more widely used as technology matures which will in turn generate increased demand for remote access services.

## **Software**

The District will continue to maintain and update a standard set of contemporary software for educational, personal productivity and administrative uses. The Microsoft Office 2010 suite has become the district standard. Migration to the 2013 packages will occur as the need arises. Client software will be upgraded to keep pace with evolving Windows standards; server software will parallel this evolution. Hardware upgrades will be a continuing necessity to meet the ever-increasing processor and memory requirements of more demanding client and server software implementations. All software will be maintained at a functional revision level. The district has implemented a decentralized, distributed processing, client-server model student record system residing on a remote, NERIC hosted server with some components at the desktop level. This will place smaller demands on the DAN infrastructure. Backups will be accomplished across the network each night. These backups will also include individual machines on a rotating basis.

## **Computer Labs**

The District will provide at a minimum, one computer lab in each elementary school and 2 labs in the Middle School-High School. The labs will have the capacity to instruct 26 students.

## **Computer Assisted Instruction for SWD and Assistive Technology**

The District will ensure that Students with Disabilities will have equitable access to instruction, materials and assessments. The District will provide assessments for students upon request including those for assistive technology. The District will provide Assistive Technology for students based on their Individualized Educational Plan. The District will provide access to software, including web based for SWD. Assistive Technologies will be procured to provide SWD the ability to enhance their learning experience.

## **Security and Access Controls**

The District will ensure Student and Staff safety by providing limited access to buildings through access control technology and will install security camera and recording technology for added safety. The security systems will co-exist with the network system by running on a separate V-LAN so traffic does not interfere or impede either system.

## **Technology Acquisition, Funding & 3-Year Projection**

### **Annual Budget-Hardware, Software & Supplies (\$51,000)**

The District will use the annual Hardware and Software State Aid funding to support and enhance Technology based on current needs. The District will supplement State funding for the purchase of software and needed supplies.

### **Annual NERIC Support (Annual Budget \$245,000)**

The District will contract with NERIC for Data services, a full time Level 4 Technician and a part time level 2/3 Technician. NERIC will coordinate internet and intranet services.

### **NERIC Installment Plan (3-Year Budget \$50,000)**

The District will contract with NERIC to purchase computers on a three-year installment contract. The technology Department has established a preferred acquisition/retirement plan for new computers for the next 5 years.

### **Student Management System (\$35,000 Annual)**

The District will continue to upgrade Schooltools, the student management system, the attendance and grading program. If and when the time comes that Schooltools no longer meets the District's needs, the District will investigate a new student management system.

### **Security and Access Controls (\$330,000 One Time, 25,000 Annual budget)**

The District will upgrade the access control system and the security and camera recoding system.



## Professional Development

Professional Development has been identified as a major goal of this plan. The District recognizes the need to provide training to staff and students to be able to use technology to its fullest potential.

A thriving learning community focuses on improving learning for all of its youth and adult members. In order for staff members to create powerful learning experiences for children, they need to be engaged in the same. The professional development strategies for improving learning and teaching with technology are a part of numerous district and school-based strategic plans and curriculum initiatives.

Areas for implementing technology goals:

### 1. Productivity

- Increase teaching time by using a Student Information System management program to streamline grades, attendance, health records, test scores and more.
- Use report card programs and databases to manage student data.
- Prepare high quality teaching materials at the desktop.

### 2. Communication

- Use electronic mail systems to communicate within the building and district.
- Use network access to link up with other educators on specific topics through online discussion groups and professional listserves.
- Increase communication with parents by phone and email exchanges, by posting information on classroom and school websites, and with a Parent Portal.
- Collaborate with distant learning partners via online global projects and distance learning opportunities.

### 3. Information

- Access current information to supplement teaching resources with electronic sources and online services.
- Access professional journals, primary source documents and other information online.

### 4. Assessment

- Evaluate individual work and class progress with reporting options available on software programs.
- Report student achievement to parents.
- Review portfolios of student work and writing saved on the network.
- Prepare written assessments of student progress with report card programs.

## 5. Instructional Resources

- Use a variety of multi-media materials to more effectively differentiate instruction to reach students with diverse learning styles and needs.
- Plan individualized learning programs based on assessment data.
- Increase student motivation with expanded multi-media resources for classwork and assignments.
- Provide opportunities for students to work collaboratively and actively.
- Guide student use of the Internet by creating and using curriculum pages on school and district websites. Teachers or teacher teams search through numerous sites to find a few select sources, which support the district curriculum and are appropriate for students.
- Guide students to deeper investigations by collaborating with other teachers to create online student research projects.

## 6. Staff Needs Assessment

Our district will develop and employ a Needs Assessment to plan for staff development opportunities.

## 7. Building a culture of continuous Staff Learning

- Tech Committees identify in-school “experts” or “lead learners” who assist colleagues with new programs or ongoing learning.
- Tech “experts” in each school offer building-level support and inservice classes.
- The Educational Technology Center (NERIC) supports staff learners with phone and email Help lines.
- A Technology consultant/professional answers specific questions and designs and offers workshops.
- The Educational Technology Center builds a professional library of books, videos, and resources to support staff learning.
- The district website is a rich resource for staff learners. Students and staff are both consumers and creators of curriculum resources online.

## 8. Funding for Staff Development

- Funding for staff development has been understood by the AuSable Valley Central School Central School District to be critical to the successful implementation of technology throughout the district. To date the district has primarily funded staff development through district operating funds, NYS Learning Technology Grants, and Title I Technology Grants. This should continue for the foreseeable future. NERIC and CVES (BOCES) also provide help through state-aided support.

**AuSable Valley Central School  
Detail Table on Professional Development**

<b>Area of Focus</b>	<b>Intended Group</b>	<b>Type/Training</b>
Internet Safety	K-12 Faculty, Administration & Staff	Group session-Methods to protect identity and to protect computer from malicious software
Microsoft Office	All District Staff	Trainers will provide basic and advanced sessions
Advanced Internet Searching	All District Staff	Guided hands-on & group session
Parent Portal	K-12 Faculty, Administration & Parents/PTO	Staff training with parent notification and seminar
VOIP/Phone System	All District Staff	Guided hands-on & group session
SMARTBoard Training	K-12 Faculty & Administration	Guided hands-on & group session
• Introduction	K-12 Faculty & Administration	Guided hands-on & group session
• Advanced	K-12 Faculty & Administration	Guided hands-on & group session
• Clickers/Airliner	K-12 Faculty & Administration	Guided hands-on & group session
• Lesson Activity Tool Kit	K-12 Faculty & Administration	Guided hands-on & group session
• Smart Response	K-12 Faculty & Administration	Guided hands-on & group session
• New Smart Add-ons	K-12 Faculty & Administration	Guided hands-on & group session
Email	All District Staff	Guided hands-on & group session
Microsoft Exchange	All District Staff	Guided hands-on & group session
Virtual Learning/Field Trips	K-12 Faculty & Administration	Guided hands-on & group session
Distance Learning	K-12 Faculty & Administration	Guided hands-on & group session
Assistive Technology	K-12 Faculty & Administration	Guided hands-on & group session
Web Site Development/Bookmark pages	K-12 Faculty & Administration	Guided hands-on & group session
Basic Integration Skills	K-12 Faculty & Administration	Guided hands-on & group session
Video Streaming	K-12 Faculty & Administration	Guided hands-on & group session
User Forums	K-12 Faculty & Administration	Guided hands-on & group session
Elluminate/Go To Meeting	K-12 Faculty & Administration	Guided hands-on & group session
Best Practices & Assessments	K-12 Faculty & Administration	Guided hands-on & group session
Pod casting	K-12 Faculty & Administration	Guided hands-on & group session
Emerging Technologies	K-12 Faculty & Administration & Appropriate Staff	Guided hands-on & group session
Security	Administration & Appropriate Staff	Guided hands-on & group session

## Assessing Plan and Impact on Technology

The AuSable Valley Central School District regularly collects data in order to improve services in learning and teaching. Evaluation of the Technology Plan falls into three areas: technology implementation and support, use of technology to achieve learning goals and staff development.

Many evaluative processes have been discussed earlier in the document. Here is an overview:

### **Technology Implementation and Support**

- District Technology Committee meets semi-annually to monitor the Technology Plan.
- Review of annual budget for technology.
- Database of all technology-related equipment.
- Evaluate district technology via a local and/or national standards tool (ISTE).

### **Use of Technology to Achieve Learning Goals**

- Student rubrics will be established for monitoring technology-related skills.
- State testing results will be monitored for technology skills.
- Evaluate student technology skills with a local and/or national assessment test.
- Develop learning goals based on the test results.
- Classroom teachers will evaluate student technology skills.

### **Staff Development**

- Needs Assessments will be developed to monitor technology skills.
- Workshop and conferences regarding technology will be advertised and encouraged.
- A Technology Self-Assessment test will be developed.
- Courses will be provided in-district for skills and curriculum integration.
- Pilot Projects incorporating new technologies will be encouraged.
- Continue staff development for administrative, faculty and staff.

## **Stakeholder Involvement**

The District will involve key Stakeholders including teachers, parents, students, community and administrators in the development, review and update of the Technology Plan. The plan will be posted on the District website for community access and ease of review.

## **Implementation**

The District will ensure proper implementation of the Technology Plan by periodic review and assessment by the Technology Committee members. NERIC will be responsible for timely installation of hardware and software. District administrators will coordinate with NERIC and other training resources the implementation of training sessions.

## **Technology Literacy Assessment**

The targeted results for this technology Plan are that all students are technologically literate by the time they finish eighth grade. The Technology Committee in conjunction with District administrators will review testing data, teacher assessments and surveys to determine literacy levels for each student. The District will utilize appropriate assessment instruments when determining student technology literacy as outlined in ISTE, NYS MST Standards.

## **Internet Safety**

The District will make internet safety a priority. The District has established 3 Board policies:

- #4526 Computer Network Acceptable Use Policy
- #4526.1 Computer Network Web Policy
- #4526.2 Internet Safety Policy

In addition to the above policies, Middle School-High School students and staff members will annually review and sign a Computer, Network and Internet Access agreement. This agreement explains acceptable use of District technology. Middle School-High School students and faculty will receive training regarding the contents of the documents at the beginning of each year. Elementary students and staff will be required to receive training one time.

The District will also work with NERIC to maintain proper firewalls and internet access protocol.

