

Allegan Public Schools

TECHNOLOGY PLAN

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Introduction

Mission Statement: A community committed to developing responsible citizens, productive workers, and life long learners.

The Allegan Public School District: The Allegan Public School District is approximately 157 square miles in area. It is made up of the City of Allegan and portions of or all of the townships of Allegan, Cheshire, Heath, Lee, Monterey, Otsego, Trowbridge, Valley, and Watson. The community has a large number of inland lakes within its boundaries – Miner Lake, Duck Lake, Eagle Lake, Pike Lake, Minkler Lake, Dumont Lake, Wetmore Lake, Swan Lake, Lake Allegan, and the Kalamazoo River – that provide many recreational activities. The Allegan State Forest is located on the western side of the school district. The major employers within the school district are: L. Perrigo Co., Haworth, TruHeat, Electro Heat, Millcraft, Crescent Pipe, Allegan Metal Finishing, Flashes Publishing, Allegan General Hospital, Allegan Public Schools, J & J Fabrications, Delano Service, and Independent Tool & Die.

The Allegan Public School District is made up of: L. E. White Middle School, Allegan High School, Allegan Alternative High School, and four elementary schools- North Ward, West Ward, Dawson, and Pine Trails. The number of students attending Allegan Public Schools in the 2009-10 school year is approximately 2,800.

The L. E. White Junior High building was completed in 1970. The school was built to provide a unique educational environment and opportunities for the middle level students in grades 7, 8, and 9. In 1994, an addition and renovation to Allegan High School was completed that allowed the 9th grade to be housed in the high school. In the 1994-95 school year, the 6th grade came into the building changing the L. E. White Junior High to L. E. White Middle School.

Over the last decade, the voters in the Allegan Public Schools have approved over 50 million dollars to finance structural and technological improvements for the public schools. In the spring of 1996, the citizens of the Allegan Public Schools District approved a bond issue to renovate the four elementary buildings, the middle school, the alternative high school, the administration building, and the outdoor athletic facilities. In the fall of 1998, the renovation to L. E. White Middle School began. The renovation created nine new classrooms, two computer labs, a restructured library, a new cafeteria, and expanded the outdoor play field. The renovation created the needed classrooms and space to allow the 8th grade teachers to be grouped into two academic teams. In the summer of 2000, the voters again approved a bond to finance the construction of a performing arts center and community aquatic center.

Technology is an integral part of the Allegan Board of Education Goals. Allegan Public schools are leasing fiber-optic connectivity that will allow inter-connectivity to the Allegan Area Educational Service Agency, and all local districts, as well as Ottawa Area Intermediate School District (Ottawa ISD) and Kalamazoo Regional Educational Service Agency (KRESA). The fiber connectivity will support these types of services:

- MOODLE - Instructional Systems
- United Streaming - Video Programming
- Student Information Systems and Financial Management Packages
- Remote Backup and Disaster Recovery Planning
- Centralized Helpdesk and Remote Monitoring and Support
- Distance/Collaborative Learning
- Document Imaging
- Internet Access/Carrier Services
- VOIP
- Gradebook and Assessment systems

Sysops, technology teachers, administrators, tech assistant, the Director of Technology and community leaders are part of the team that work toward making sure that our technological innovations have a positive impact on student achievement. The goal states that "The district will maintain a physical environment which is conducive to learning by providing adequate resources for preventative maintenance, obsolescence plan for technology and other equipment, and successful upkeep of all district resources."

Section 3 - Visions and Goals

Allegan Public Schools Technology objectives align with State and National Educational Technology Standards. NO CHILD LEFT BEHIND mandates that schools will "Assist every student in crossing the digital divide by ensuring that every student

is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

These objectives are integrated within Math, Science, Social Studies and Language Arts, State of MI content standards. The new fiber wide area network infrastructure recently completed in Allegan County will enhance these visions and goals.

1. Make current educational, non-print resources available to every classroom on-line services (Internet), educational broadcast programming, computer software, free and open source e-learning software platforms like MOODLE, web based email systems, and web based applications to improve communication, collaboration and security).
2. Put time effective, cost effective and easy to use information management tools and learning tools directly into the hands of students and employees. (web based student information systems, grade books, assessment and progress monitoring tools.)
3. Provide students with alternatives to paper/pencil activities. Enable students to produce materials generated by technological tools (internet access, word processing, desktop publishing, data processing, spreadsheets, video camera equipment, electronics, robotics, hydraulic and pneumatics applications).
4. Improve school/community/business communication by providing easy, convenient on-line access to school information.
5. Improve internal staff communication through the use of voice mail and electronic meetings and messaging. These tools can reduce annoying interruptions during class time, reduce traditional mail and eliminate "phone tag".
6. Increase staff efficiency by providing the technology, which facilitates electronic messaging, attendance recording, lesson planning and record keeping.
7. Improve staff and student involvement and support by providing regular equipment and software training. (If we underestimate the impact people have on this process, we will overestimate the power of technology.)
8. Maintain safety, confidentiality and security for all student and employee records according to State and Federal Mandates.

Visions and Goals-Strategies to Achieve

1. Maintain a high speed, secure cabling system (voice, video and data connections) between buildings and in each classroom and office that allows for growth and change and balances cost with utility needs. Maintain a high speed fiber wide area fiber network robust enough to handle the internet needs of the district and connect the district to a variety of high quality, online educational resources
2. Provide each classroom with a 26" TV, which is cable and satellite ready and part of the video distribution network allowing school announcements. Each classroom will also be equipped with a telephone, DVD, computer and printer and high speed internet capacity.
3. Develop a wide area computer networking system which can handle the software necessary to manage student records, class scheduling, electronic attendance (staff and students), grade reporting, curriculum data bases, library resources, electronic messaging and calendars, maintenance, transportation and food service needs, athletic scheduling and inventory and high speed internet access.
4. Provide a web based, central video center containing a district production studio, videotape, DVD, CATV, and internet link. This central video center should allow live broadcasts of school news/announcements to every TV in the building.

5. Provide equipment and software for technical education applications (pneumatics, robotics, hydraulics, etc), distance learning and credit recovery applications and other on-line learning resources.
6. Install a system to provide voice mail 24 hours a day. An Allegan Public Schools' information number or web page will be updated to include class schedules, home work assignments, links to PIV student grading program, school events, lunch menus, meeting schedules, transportation disruptions and school closing information.
7. Implement a Technology Disaster Recovery plan to assure all hardware, software and infrastructure systems are maintained, updated and secure.
8. Maintain a technology staff, which includes a Technology Director, a Technology Expert and SysOps to keep the voice, video and data networks updated, reliable and secure.

Section 4 - Curriculum Integration

1) The Allegan Public Schools district will be exploring a variety of instructional strategies that use technology to improve teaching and learning. These strategies include:

- An online learning platform that addresses anywhere/anytime learning, and integrates 21st century learning techniques with time tested learning methodologies.
- One to One learning tools such as student use of:
 - Net books, Cellular Phone, IPOD and other mobile computing devices.
 - Web Hosted applications for anywhere/anytime access

2) METS Standards are embedded in the curriculum

3) Professional Development in Assistive Technology and UDL strategies that support learning.

4) Curriculum Technology Integration

- Every student will have multiple means of broadband access to anywhere, anytime learning outside of the traditional school building
- to establish, promote, and support statewide utilization of videoconferencing, including Internet Protocol (IP)-based technology solutions, to increase synchronous anywhere, anytime learning.
- To build capacity for off-hours support and maintaining sufficient technical staff at the ESA and district level to support innovative educational opportunities in the classroom

Below please find examples of how Michigan technology benchmarks are integrated within content areas. Integration Activities and Resources for all core academic areas were implemented and updated as a part of our technology curriculum in August, 2009. The goal is that these Standards and Expectations will ultimately be integrated into the various other content areas and that a supplementary document will be produced offering examples and suggestions on how they could be incorporated within those areas. The new high speed fiber wide area network infrastructure will allow Allegan Public Schools to optimally integrate technology and curriculum.

Elementary and Secondary Integration into All Content Areas – Activities and Resources Sample

On-line and In-District Resources for Language Arts, Social Studies and World Languages

- Word processing, spell check, thesaurus and grammar checking software used in writing process.
- Database and telecommunications for research and communication
- Organize, track, investigate and communicate progress in reading with databases and spreadsheet
- Intervention, remediation and reinforcement of language arts skills

- ❑ Multimedia reports and procedures with graphics, text, and sound
- ❑ Creation of timelines of events
- ❑ Desktop publishing of documents, reports, and other published materials
- ❑ Video portfolios
- ❑ MOODLE course management resources
- ❑ CD-ROM and online resources for research
- ❑ Multimedia software and hardware used in student reports and productions
- ❑ Instructional resources on videotape, videodisc, and instructional TV
- ❑ Still video and digitizing peripherals used in student projects.
- ❑ Simulation software used in problem solving
- ❑ Individual and cooperative learning involving computer based resources
- ❑ World language word processors for writing
- ❑ On line reading diagnostics providing in depth analysis and progress monitoring
- ❑ Introduction to languages via digitized voice
- ❑ Digitized audio for language development
- ❑ STAR Reading Assessment K-12
- ❑ Ren Learning Assessment masters
- ❑ Web Page development software

Math and Science

- ❑ Database and spreadsheet software used in research
- ❑ Intervention, remediation and reinforcement of software for skill development
- ❑ Simulation software used in problem solving
- ❑ Database and telecommunications for research and communications
- ❑ Instructional resources on DVD, CD, and instructional television
- ❑ Multimedia software and hardware used in student reports and productions
- ❑ Computer based laboratories for measurement/analysis
- ❑ Simulation software used in problem solving
- ❑ Download and analyze data from weather satellite via internet resources
- ❑ Review of basic skills and concepts using computer based resources
- ❑ Star Math Assessment K-8

Arts and Music

- ❑ Computer drawing programs for creative expression
- ❑ Design compositions involving various computer based resources
- ❑ Multimedia production and portfolios
- ❑ Use of Animation Software
- ❑ Use of still and live video in projects
- ❑ Database and telecommunications for research
- ❑ Art history and appreciation involving sources on video and CD-ROM
- ❑ Use of MIDI interface for music composition and performance
- ❑ Creative music expression using multimedia resources

Section 5 - Student Achievement

Over the last 3 years elementary, middle school and high school Technology Courses (based on national and state standards) have been implemented within our district and minimum exit skills have been established. In addition, integration of technology into instruction and assessment for the purposes of higher student achievement in the core curricular areas as demonstrated in MEAP and MME scores is an ongoing effort. The new fiber wide area network infrastructure will enhance our efforts to deliver the curriculum and prepare students for the careers of the future. Career Pathways planning in our middle school and high school will help drive this integration and strengthen achievement of curriculum and technology goals for all students. The High School and Alternative Ed High School have instituted a trimester schedule in order to implement career pathways. The high schools are also working with post secondary colleges and technical academies to align curriculum and instruction. The new High School Content Expectations are currently being studied to determine how best to integrate curricula and instruction with technology. A specific example

of how technology is integrated into curricula and instruction is our Middle School Safe Futures program. Funded by a Federal grant, we utilize scanners, computers and skill development software, to help students master the Middle School Math Grade Level Content Expectations.

Section 6 - Technology Delivery

Our technology planning process provides for access to technology tools by all students. Wireless labs have been installed since April 2007 to insure that all buildings had equity and flexibility in accessing district and online learning resources. Other wireless computer labs are planned over the next three years. In addition, the district owns Smart Boards which offers tactile access (other than keyboard) to on-line and in district learning resources. In addition, permanent and portable large screens, LCD media projector equipment, LCD Projectors, Point & Shoot video cameras, document cameras, flexible alternative keyboards, text to speech Writer's keyboards, speaker systems, MIDI interface for music composition, microphones, amplifiers, smart boards and books on tape/compact disc are available for classroom and lab use.

The Allegan AESA contracted with Arialink to bring fiber optic capacity to 14 participating sites. This contract added 105 new route miles to Arialink's current statewide fiber optic network. The network will bring fiber optic capacity to underserved areas of West Michigan that suffers from a lack of competitive broadband or advanced telecom options. Arialink hopes to leverage this network extension for the benefit of all regional business and residential consumers. The Allegan AESA will use the fiber optic network to facilitate educational resource sharing, cost reduction and integration of advanced curriculum into the region's education programs. Allegan Public Schools is an active member of the Allegan County consortium.

The fiber optic project will benefit Allegan Public Schools by using centralized shared approach for many educational applications, including the following:

- Blackboard – Instructional Systems
- United Streaming - Video Programming
- Student and Financial Management Packages
- Remote Backup and Disaster Recovery Planning
- Centralized Helpdesk and Remote Monitoring and Support
- Distance/Collaborative Learning
- Document Imaging
- Internet Access/Carrier Services
- VOIP

Section 7 - Parental Communications and Community Relations (Interface With Community)

The School Improvement and Technology Plans are available on the Allegan Public Schools district website. Printed Plan Booklets are available upon request. Technology will provide voice and Internet links between home and school through voice mail, Internet access connections and district/home web pages and digitized grade books and report cards. Printed materials and public meetings are also a part of our communications regimen. The Pinnacle Internet Viewer was implemented K-12 during the 2006-2007 school year. This tool provides parents with online access to student progress reports. It also provides e-mail options if parents have questions or concerns about their student's progress. In 2009, the web based Global Scholar Curriculum & Assessment program was implemented. This is a web based assessment system which incorporates "Item Analysis" – the ability to track student progress on individual learning standards. This information will also be available on line for parents.

The Allegan Board of Education has approved the Technology Acceptable Use policy. Teachers, staff, students and community members will be in-serviced on the policies and procedures regarding the APS Acceptable Use Policy and Technology Code of Ethics for computer voice data networks.

Section 8 - Collaboration

Allegan Public Schools collaborates extensively with the Allegan Intermediate School District to share expertise, equipment, technology training and other resources. The Allegan County Technology Directors meet monthly to organize training opportunities, bring in speakers, vendors, and coordinate services. In 2002, all districts in Allegan County agreed to collaborate on a literacy initiative based on a model developed by Allegan Public Schools. The multi-year action plan incorporates technology extensively as a tool to compile and manage data. In the 2006-2007 school year, the district partnered with AAESA to incorporate a student grading program objectives manager and Parent Internet Viewer. In 2007, Allegan Public Schools joined with the Allegan AESA to expand the fiber infrastructure in the county. This will enhance communication with literacy service providers. Allegan Public Schools Adult and Alternative Education programs collaborate with other county public schools in order to improve services.

Section 9 - Professional Development

The most repeated comment heard about technology in all walks of life (schools, businesses, and home) is that technology cannot be used to its full potential without proper training. Allegan has attached substantial significance to the issue of training and support. Our primary objective is to make teachers comfortable integrating technology into their existing curriculum and thus gain the full utility of the technology for students. All training is based on research on best practices and focused on improving student achievement. Allegan has partnered with Allegan AESA to provide the following essential services and support:

- Staff development time to be provided for teachers to evaluate software packages used at each grade level. Software will be evaluated based on State of MI content standards and benchmarks, and teaching and learning standards and benchmarks, MEAP objectives, School Improvement goals and national standards for technology, teaching and administration.
- Software and on line program accessibility determined by grade/objective appropriateness of software.
- Staff development time will be provided for teachers to learn the software and plan for its integration into the curriculum.
- Training for Distance Learning on-line learning experience.
- Technology teachers provide 45 minutes per week of technology instruction to all K-5 students. Middle School and High School technology classes are provided to all students. Technology teachers are powerful resources for technology integration into the curriculum. Technology instruction for all K-12 Technology courses is based on the State of MI Technology benchmarks and objectives are scheduled for the summer of 2008 and 2009.
- Teachers were trained on the Ed Tech Standards and Expectations resources so they can better understand the educational requirements established in the MI Curriculum Framework. The content focus for this training was on Math, Science, Language Arts, and Social Studies. Internet links to these resources are posted on all Allegan Public School websites.
- Teachers have been trained on Internet based full text resources from First Search Databases available from the Michigan E-Library Project. The focus of this training was to strengthen instruction in the core academic areas thru the efficient use of on line database resources.
- Allegan Public Schools is working with the AAESA to incorporate web based course content systems into our planning and implementation of technology by North Central Regional Education Laboratory (NCREL) to help schools evaluate technology and its use (physical use as well as integration into the curriculum and learning) in the school.
- Key media specialists and teachers have been trained to utilize the "United Streaming" site license K-12. This site provides thousands of educational video resources covering all content areas, all grades and all levels. This database is fully equipped to search by MI core content standards, subject, news release, etc
- On-line resources are used to monitor and enhance tracking and evaluation of Professional Development. In addition, we currently track staff development through the use of an Access Database.
- QuickTime Virtual Reality (QTVR) software introduction. This software can also create animated movies.
- Tech Assistant and sys-ops will attend ZEN training.
- Staff development is provided for administrators and principals on the web based Pinnacle grade book and District Data Analyzer. Both tools were purchased to track student progress on the State of Michigan curriculum standards more effectively.
- Promote Michigan's Professional Standards for Teachers and the Program Standards for the Preparation of Central Office Administrators will contain critical elements of NETS-T/A, 21st Century Skills and the principles of Universal

Design for Learning (UDL). Professional Development will provide teachers and administrators with the opportunity to develop and/or demonstrate proficiency, especially in the areas of information and media technology

- Develop rubric-based assessment that measures the use of technology to deliver instruction, including assistive technology and principles of UDL
- District will provide training to teach METS for instructor assessment

MOODLE

Moodle, which stands for Modular Object-Oriented Dynamic Learning Environment, is a course management system (CMS) - a free, Open Source software package designed to help educators create effective online learning communities. There are currently more than 20,200 registered Moodle installations worldwide.

Moodle is specifically designed to help educators create effective online learning communities. Its main functions include course management and content management. Educators create a course profile and then add activities and content to their course schedules. Course management includes settings like a schedule of events, access privileges, grades, attendance, and course backups. Content management includes dozens of gradable activities, such as forums, chats, and journals, a question bank to store questions for exam creation, resource management for informational documents like syllabi, and project instructions.

Moodle provides a full variety of activities that teachers can add to a course. Communication and collaboration may take place using Chats and Forums. Adding Wikis to courses is an excellent way to allow students to work together on a project. Work can be submitted by students and marked by teachers using Assignments or Workshops. Surveys and Databases are also very powerful additions to any course.

With the leased fiber, all Allegan County schools can access the Moodle tools and use at will.

Other tools that will become widely available to Allegan County schools through the leased fiber include *united streaming*, a digital video-on-demand and online teaching service to help improve students' retention and test scores, and Michigan Virtual School (on-line learning resources).

Technology staff development is scheduled before school starts in early August and is based on district school improvement goals and technology resources. Self Paced On Line resources are used extensively because they are a cost effective and timesaving alternative to conducting our own classes . Technology Sys-Ops have been hired to attend pertinent training sessions outside the district and then provide on-site training to staff before school, after school and during scheduled in-service times. The Technology Director and Technology teachers help coordinate and deliver these services.

Section 10 - Supporting Resources

The following software tools and web sites are provided to teachers and principals for classroom management, organizing, planning, student progress tracking (assessment) and communication purposes. In addition, teachers and staff will be provided with a series of in-service sessions which show the benefits of and process for using Moodle, United streaming, and Michigan Virtual School.

- ExamView and Global Scholar Curriculum and Assessment On Line resources, to develop assessments that link to curricula and instruction
- A new web based Student Information system will be implemented in December, 2009
- Electronic messaging (voice and email)
- Word processing, spreadsheets, data processors, desktop publishers and other technology productivity tools
- District calendars/scheduling
- Internet access in every classroom - to include Internet browsers, email packages, interactive web sites, web design tools, desktop conferencing and groupware
- Pinnacle Grading and Reporting program (web based)
- PIV server access to all K-12 parents

- Michigan Virtual University and other on-line post secondary resources.
- United Streaming site license- a K-12 website providing thousands of educational video resources addressing all content areas for all grades and levels. This database is fully equipped to search by MI core content standards, subject, news release, etc.
- QuickTime Virtual Reality (QTVR) software training. This software can also create animated movies called Claymation
- Michigan Virtual High School on-line resources
- DIBELS website
- Language! website
- Technology research tools
- Moodle websites
- Accelerated Reader
- K Keys
- Star Reader
- Microtype
- District Data Analyzer

Elementary Software to support Curriculum Integration and Technology Training

Internet browsers and web design tools
Follett Media Center Reference Software
Language Arts
Math
Social Studies
Science
Multimedia applications
Office 2003/2007
Assessment Database

Secondary Software to support Curriculum integration and Technology Training

Internet browsers and web design tools
Business and Technology productivity applications, including Internet
Follett Media Center Reference software
Graphics and Desktop publishing software
Career Prep reference software (MI Dream Explorer-free; Career Crusin'-\$585.00/yr)
Office 2003-2007
Assessment Database
Ren Learning ELA and math software system
Dreamweaver 8.0

Administrative Software

- Bus route mapping
- Maintenance Access Database
- GED Access Database
- School Supply Database
- Resource Scheduling Access Database
- Pinnacle Report Card and Parent Internet Viewer web based systems
- Employee Professional Staff Development Access Database
- Food Service reporting
- Searchable documents (core curriculum, school code, contracts, student handbooks, and BOE documents)
- Student Management Package (SASI xp)

- Financial Management package to include payroll, personnel management, general ledger budget preparation, requisitions and purchasing, accounts receivable, inventory systems, check reconciliation, and work flow routing of documents.
- Internet browsers, email packages, and web design tools
- District Data Analyzer

Section 11 - Infrastructure, Hardware, Technical Support and Software

Current Infrastructure: The AAESA and local districts, as part of our county-wide long range planning, identified the need to design and implement an educational and administrative information system within each of the constituent Districts and connecting with KRESA and Ottawa ISD.

Needs:

1. **Greater Bandwidth** for our local districts- more internet based traffic (Phones, video streaming, on-line learning, etc)
2. **Greater Connectivity** for consolidation of services (sharing services with others in the region)
3. **Greater Service Options-** Without fiber there are limited options in vendor selection for phones, internet and cable. For example, DSL/cable not available in certain areas of the county.
4. **Greater Cost Efficiencies** - Fiber opens up pricing options for phone services (no longer limited to Verizon or sbc/AT&T.)

Voice system will consist of a distributed, district owned private branch exchange (PBX). Each classroom, conference room and office will be provided with a digital telephone set. Voice processing system will be centralized and make voice mail and automated attendant functions available district wide. District fiber optic backbone and multiplex electronics will carry conversation and control channels between facilities. In 2003, the district began to integrate IP telephones to the district voice network. A new voicemail software system was installed in 2006.

Data system will consist of local area networks in each facility and a district network. Local networks use category 5 unshielded twisted pair cable horizontal wiring in a star topology. Backbone cabling will be graded index multi-mode fiber optic media. Cabling plant will be designed and installed in accordance with applicable industry standards for extended performance and life. District network will consist of fiber optic cabling from each facility to the Administration Building. The initial network will incorporate multiplexed synchronous signals over the fiber. Later performance requirements will require an upgrade to Asynchronous Transfer Mode electronics. A wireless computer lab was installed at our High School October, 2006. This technology will help us be more flexible in providing computer access to students in all school buildings.

Video system will consist of broadband video cabling from a central point in each facility to each classroom, media center and selected offices and conference rooms. The system will allow local origination of signals for distribution throughout the facility. Televisions, videocassette recorders and mounting hardware will be installed in each classroom. Televisions will be wired to accept signal from the classroom computer station in each classroom for display to the entire room. Classrooms and office areas will be ready wired for mobile video production carts.

USF-Ten School districts of Allegan County signed agreements to purchase Arialink services through a consortium led by the Allegan Area Educational Service Agency (AAESA). The services will include fiber optic (Gigabit) Wide Area Network (WAN), Local and Long Distance Telephone Service and fiber delivered internet services.

In 2007, Allegan Public Schools contracted with Arialink to bring gigabit optic capacity to Allegan Public Schools and 13 other participating sites. This project is almost complete. It has added 105 new route miles to Arialink's current statewide fiber optic network. The network will bring fiber optic capacity to underserved areas of West Michigan that suffer from a lack of competitive broadband or advanced telecom options.

The Allegan AESA will use the fiber optic network to facilitate educational resource sharing, cost reduction and integration of advanced curriculum into the region's education programs. United Services Funds (USF) will be used to pay for part of the cost of the leased services. Leased fiber includes internet.

Internal Connections Include

- Intercom
- Cabling (Within and between schools, not across a public right-of-way beyond school.)
- Operating system software. (some)
- Video (Necessary to transport info to classrooms or library.)
- Racks and cabinets (if components they contain are eligible.)
- Cabling connectors: conduit, faceplates, raceway, etc.
- NICs (used in eligible equipment)
- Access Points
- Hubs/Switches
- Voice/Video over IP (VoIP) components
- Firewall
- Servers (An eligible server must serve as conduit for info. Rather than a source for content.)
- Proxy Servers
- Tape Backups (part of eligible server)
- VPN components
- Antennas, satellite dishes
- Network operating system software
- PBX
- Voice Mail

The Allegan Public Schools district will maintain internal & external connections needed to support reliability and scalability of the network

United Services Funds are also used to pay for a portion (percentage based on at risk numbers) of the telephone services (local/long distance and cell phone packages) currently used by Allegan Public Schools.

Section 12 - Increased Access

Infrastructure, Hardware, Technical Support and Software

This system designed to increase access will be a Wide Area Network utilizing fiber optic cable extending from the AAESA out to a single point. Allegan Public Schools has designed its voice, video and data networks to provide increased access to technology for all students and teachers utilizing fiber optic cable extending from the AAESA out to a single point.

All school buildings have computer labs with updated equipment and connection to high speed network and internet. To increase accessibility for students needing assistive technologies, a wireless computer cart with 16 computers was purchased for the High School. Next year's budget includes additional wireless computer carts.

Media centers at the secondary level will contain 8-10 computers each and 2-3 computers in the elementary media centers. The Follett Automated Media Center Software system has been installed on the network to maintain circulation. On line databases will be available in all buildings. MyDream Explorer webbased software is being used to facilitate Career Prep activities.

District wide phone system will include phones in all offices and classrooms, fax and modem locations within all buildings, and voice mail for all staff/teachers during and after hours. A 5 year plan is in place to upgrade the system

Fiber between buildings will allow video broadcast between buildings, K-8 video distribution to be installed within each building. Each classroom will have a VCR and Television with 27" monitor with Computer to TV projection using scan converter and LCD projector. A county wide expansion of the Wide Area Fiber Network infrastructure is almost complete.

Allegan Public Schools will work collaboratively with the Allegan AESA and other ESAs and REMC's:

To develop means of timely return of "connected" data to all education stakeholders, as well as supporting and sponsoring professional learning opportunities to help them understand how to use data to improve student achievement.

To develop and provide professional learning opportunities for Michigan educators on how to use data effectively for classroom decision making.

Infrastructure Maintenance and Upgrade

District computer equipment shall be depreciated over no longer than a 4 year schedule. Each year, the District shall replace computer hardware by installing new equipment in critical areas requiring current hardware and moving older equipment to other applications in the District as appropriate. Leasing options on short-lived equipment such as computers are being explored.

A district database is maintained which catalogs the current status of technology equipment. Tags are affixed to equipment that indicates the serial number, bldg located, room located and date serviced. Preventative maintenance and equipment evaluation is based on information from this database and the technology work order database.

Services that will need to be acquired to improve education include upgrading and expanding capacity on our PBX system, more wireless lab computer equipment to supplement existing wired infrastructure, UPS upgrades and replacements to protect switches and servers and gigabit switch replacements.

The district has commissioned an evaluation of its network infrastructure. This included an analysis of hardware, software, backup and recovery systems. The 5 stage process was completed in January, 2008. This documentation is now part of our disaster recovery process.

Technology Support Ladder for Training/Support

The purpose of an electronic information system is to improve communication, collaboration and coordination, and thereby improve the efficiency and effectiveness of groups working together. Voice, video and data, WAN maintenance and support are critical to insure a reliable and secure network.

- Tech Assistant and/or SysOps within buildings provide on-going training and support to teachers, administrators, and support staff. (SysOps, Technology Director, and Technology Assistants to determine appropriate training and implement the training.) Specialized training outside the district is provided as needed. Tech Assistants respond to maintenance work orders for voice, video and data equipment. Work-orders are generated from the district's maintenance database.
- Technology Director and Technology Assistants to support building SYSOPS in scheduling and implementation of training.

Technology Support -Suggested Initial Training for Teacher and Administrators

- 2 hours training in general hardware use
- 2 hours troubleshooting/productivity training on hardware and software systems
- ½ day for Pinnacle Gradebook
- ½ day for DDA and ExamView, Moodle, Language!, Dibels and other on-line tools

- Follow-up training for curriculum integration.

Technology Support - Suggested initial training for office staff

- 1 day training on student management system
- 5 days training on accounting management system

Technology Support -Role of SYSOP

As our system becomes increasingly automated, less hands-on time is needed by techs and SysOps. Building SYSOP's will be provided for every 25-30 teachers. The SysOp will receive compensation for this work (contractual)

Sysop Responsibilities

- Help teachers resolve simple software, hardware, log-in, cabling and power connection problems, etc.
- Installing web based & direct connect printers
- Provide training to teachers and secretaries (where necessary) for simple, common problems like loading printer paper, printer paper jams, printer malfunctions, proper software and hardware closing procedures, data saving procedures, simple error message responses and web based e-mail system
- Assists technology staff with Internet problems such as the blocking of viruses, pornography and other objectionable materials brought into the network by spam, spy ware and/or phishing intrusions
- Assists technology staff with district student data management systems like SASI, Ren Learning and Pinnacle Plus Grading Software
- Adhere to and enforce all software licensing/copyright issues
- Assist Tech. Staff with computer replacements/switchouts

Communicating and Reporting Technology Problems

Report technology problems by entering technology work orders in the Maintenance database

Help communicate with techs and external service dispatchers like Vision and Accelerated Reader

Complete duties in a timely manner

[Last Revised: 12/14/11]

Section 13 - Timetable and Budget

<u>District</u>	<u>Technology</u>	<u>Budget</u>	<u>2009-2010</u>						
Bldg/Dept	Office/Class computers	Lab Computers	Computer Cost	Peripherals	*Voice/Data Networking	Software	Copyright Fees/Lic.	Purchased Services	Totals
Pine Trails	5		3250	\$3,250	\$2,210	\$7,550	\$9,828	\$5,175	\$31,263
West Ward	5		3250	\$3,250	\$1,870	\$6,850	\$8,316	\$4,785	\$28,321
North Ward	5		3250	\$3,250	\$1,700	\$6,500	\$7,560	\$4,590	\$26,850
Dawson	5		3250	\$3,250	\$2,040	\$7,200	\$9,072	\$4,980	\$29,792
Middle School	15		\$9,750	\$3,714	\$4,080	\$11,400	\$18,744	\$7,520	\$55,208
High School	15	12	\$17550	\$4,333	\$4,760	\$12,800	\$31,168	\$4,040	\$74,651
South Ward	3		\$1,950	\$3,032	\$340	\$3,700	\$11,512	\$2,610	\$23,144
Administration	4		\$2,600					\$2,500	\$5,100
Bus Garage	1		\$650						\$650
Maintenance	1		\$650					\$2,500	\$3,150
Food Service									
TOTALS	59	12	\$46150	\$24,079	\$17,000	\$56,000	\$96,200	\$38,700	\$278,129
KRESA Svc.	?								
Novell	\$6100								
SASI	\$12000								
E-Trust	\$5500								
Backup Exec.	\$1100								
Follett	\$4000								
Fiber contract	\$3200								
						Annual Costs for Fiber: July 09-June 10 \$17,000.00 calculated after USF discount			
WAN	\$17000					1 Year Costs for Phone Service: \$45,930 - before USF (Nextel, Qwest, Verizon 08/09)			
ISD Pole Rental	\$650								
Nortel	\$1500								
Mighty Lib.	\$1100								
TOTAL	\$52,150	\$26.84	per student						

[Last Revised: 12/14/11]

Section 13 - Timetable and Budget

<u>District</u>	<u>Technology</u>	<u>Budget</u>	<u>2010-2011</u>						
Bldg/Dept	Office/Class computers	Lab Computers	Computer Cost	Peripherals	*Voice/Data Networking	Software	Copyright Fees/Lic.	Purchased Services	Totals
Pine Trails	5		\$3125	\$3,472	\$2,210	\$7,550	\$9,828	\$5,175	\$31,360
West Ward	5		\$3125	\$3,410	\$1,870	\$6,850	\$8,316	\$4,785	\$28,356
North Ward	5		\$3125	\$3,379	\$1,700	\$6,500	\$7,560	\$4,590	\$26,854
Dawson	5		\$3125	\$3,441	\$2,040	\$7,200	\$9,072	\$4,980	\$29,858
Middle School	10		\$6,250	\$3,714	\$4,080	\$11,400	\$18,744	\$7,520	\$51,708
High School	15		\$9,375	\$4,333	\$4,760	\$12,800	\$31,168	\$4,040	\$66,476
South Ward	3		\$1,875	\$3,032	\$340	\$3,700	\$11,512	\$2,610	\$23,069
Administration	0							\$2,500	\$2,500
Bus Garage	1		\$625						\$625
Maintenance	0							\$2,500	\$2,500
Food Service									
TOTALS	49		\$30,625	\$24,781	\$17,000	\$56,000	\$96,200	\$38,700	\$263,306
KRESA Svc.	?								
Novell	\$5700								
Global Scholar	\$25,200								
E-Trust	\$5500								
Backup Exec.	\$1100								
Follett	\$4000								
Fiber contract	\$3200								
						Annual Costs for Fiber: July 09-June 10 \$17,000.00 calculated after USF discount			
WAN	\$17000					1 Year Costs for Phone Service: \$45,930 - before USF (Nextel, Qwest, Verizon 08/09)			
ISD Pole Rental	\$650								
Nortel	\$1500								
Mighty Lib.	\$1100								
TOTAL	\$64,950	\$26.84	per student						

This separate accounting is the total amount in the budget that has been allocated for resources not eligible for E-Rate support. These are the resources that are necessary for us to make effective use of the eligible services you have requested in all Block 5 funding requests across all Forms 471 that we will submit for this funding year. These resources include:

- *Hardware, such as computers, printers, fax machines, video equipment, scanners, CD-ROM drives, and servers;* **\$30,625**
- *Professional development, such as ongoing technology-related training for technical staff, teachers, and/or librarians;* **\$10,000**
- *Software, such as end-user applications;* **\$56,000**
- *Maintenance, such as systems maintenance and operations costs for ineligible hardware and software and salaries of technical staff;* **\$83,700**
- *Retrofitting, such as electrical wiring, asbestos removal, building modifications, renovations, and repairs;* **\$4,500**

In addition, the Form 471 asks for data to help the SLD document the potential impact of the Universal Service program for schools across the country, and compare that impact from year to year.

Please indicate how many buildings had broadband service before your receipt of supported services and how many will have such service after your receipt of supported services at the following speeds:

	Before	After
Less than 10 mbps	0	0
Between 10 mbps and 200 mbps	9	9
Greater than 200 mbps	0	0

Please indicate the number of drops before and after your receipt of supported services. (A drop is defined as one port). **Before: 1200 After: 1225**

Provide your best estimate of the number of classrooms with Internet access before and after your request for receipt of supported services. **Before: 152 After: 162**

Provide your best estimate of the number of computers or other devices (such as television sets, hand-held units, network terminals, and other non-PC Internet appliances) that had Internet access before your request for supported services, and how many will have Internet access after your receipt of supported services. These devices may access the Internet directly or via a local area network. **Before: 450 After: 625**

[Last Revised: 12/14/11]

<u>District</u>	<u>Technology</u>	<u>Budget</u>	<u>2011-2012</u>						
Bldg/Dept	Office/Class computers	Lab Computers	Computer Cost	Peripherals	*Voice/Data Networking	Software	Copyright Fees/Lic.	Purchased Services	Totals
Pine Trails	5		\$3,125	\$3,472	\$2,210	\$7,550	\$9,828	\$5,175	\$31,360
West Ward	5		\$3,125	\$3,410	\$1,870	\$6,850	\$8,316	\$4,785	\$28,356
North Ward	5		\$3,125	\$3,379	\$1,700	\$6,500	\$7,560	\$4,590	\$26,854
Dawson	5		\$3,125	\$3,441	\$2,040	\$7,200	\$9,072	\$4,980	\$29,858
Middle School	10		\$6,250	\$3,714	\$4,080	\$11,400	\$18,744	\$7,520	\$51,708
High School	15		\$9,375	\$4,333	\$4,760	\$12,800	\$31,168	\$4,040	\$66,476
South Ward	2		\$1,250	\$3,032	\$340	\$3,700	\$11,512	\$2,610	\$22,444
Administration	0							\$2,500	\$2,500
Bus Garage	0								
Maintenance	0							\$2,500	\$2,500
Food Service									
TOTALS	47		\$29,375	\$24,781	\$17,000	\$56,000	\$96,200	\$38,700	\$262,056
KRESA Svc.	?								
Novell	\$5700								
Global Scholar	\$25,200								
E-Trust	\$5500								
Backup Exec.	\$1100								
Follett	\$4000								
Fiber contract	\$3200								
						Annual Costs for Fiber: July 09-June 10 \$17,000.00 calculated after USF discount			
WAN	\$17000					1 Year Costs for Phone Service: \$45,930 - before USF (Nextel, Qwest, Verizon 08/09)			
ISD Pole Rental	\$650								
Nortel	\$1500								
Mighty Lib.	\$1100								
TOTAL	\$64,950	\$26.84	per student						

Section 14 - Coordination of Resources

AAESA worked closely with local districts and area charter schools to define the need, and then solicited bids for Internet and phone services as the lead member of the fiber/WAN consortium, believing that there was a potential for significant cost savings if a single vendor was utilized to bundle connectivity, telephone, and Internet costs. The AAESA will take the lead with installation and maintenance of the fiber network, allowing local districts to focus on uses of the technology, rather than the delivery.

The district Technology Budget includes line items for the following technology essentials:

New Computers	Peripherals (printers, scanners, LCD equipment etc)
Network components	Telecommunications
Software & curriculum support	System repair and maintenance
System security and disaster recovery	Licensing agreements
System service contracts and licensing agreements	
Professional Staff Development	
Technical Support	
On-Line resources	

The APS District Professional Development Budget includes funds to accomplish the staff development initiatives outlined in this Technology Plan.

STATE AND LOCAL GRANT RESOURCES

In the past the Allegan Public Schools has applied for Technology Literacy Grant Funds and other grant opportunities offered by the State. Our grant requests have not been funded. We have also applied to private multi-national companies as well as local foundations to acquire funding for special technology projects. The Allegan AESA has provided long term loans to assist Allegan Public Schools to purchase essential software (like Excelsior Pinnacle). We have joined a county consortium to up-grade and expand the current fiber network infrastructure.

Section 15 - Monitoring and Evaluation

Evaluation of Technology Plan

To measure our effectiveness in maintaining a secure and reliable voice, video and data network, we designed our database to produce reports, which analyze our productivity and cost effectiveness and help develop a budget for future needs. The database design also enables us to implement a preventative maintenance component.

. We are working toward an assessment and reporting system that allows our district to annually monitor staff and student progress toward learning goals. Our challenge is to measure how technology is contributing to student learning. To measure student levels of competencies in technology, a team consisting of teachers and administrators will meet to design an instrument to gather baseline data about the technology skills of students as they relate to our technology curricular objectives. From there, the technology teachers will measure improvement through a series of skill assessments given three times per year. Individual student progress and eventual mastery of skills will be recorded and tracked. Our district's data collection and compilation expert will analyze the data and present the results to administrators, teachers and the Board of Education. Low cost on-line assessment systems like DIBELS, SWIS and Language! have been a valuable component of this process.

Teachers have been trained on how to deliver differentiated instruction. This will help teachers use a variety of tools and methods to serve the needs of all students.

Section 16 - TECHNOLOGY ACCEPTABLE USE POLICY

Board Policy #7200 outlines the district's philosophy regarding the use of technology. This policy was adopted on 1/8/96 and revised on 7/1/99. A copy of the Technology Acceptable Use Policy follows.

Students will be permitted to use Internet resources when the following conditions are in place:

The student and his/her parent(s) have signed the district's Technology Acceptable Use Policy.

Adult supervision is present during on-line sessions.

The Internet filtering system (Sonic Wall Content Filtering Service) is operational.

Schools, in particular, have a responsibility to protect students from inappropriate and harmful Web content. In addition, both schools and libraries that receive eRate funding are required by law to install a content filtering solution in compliance with the Children's Internet Protection Act (CIPA). Allegan Public Schools uses Sonic Wall Content Filtering Service to provide the combination of control and flexibility to ensure the highest levels of protection and productivity. Sonic Wall CFS prevents individual users from accessing inappropriate content while reducing organizational liability and increasing productivity.

Building Administrators and the Director of Technology monitor the district's Acceptable Use Policy for staff and students use of technology.

Allegan Public Schools
Technology
Acceptable Use Policy
2011-2012

TECHNOLOGY

Policy #7200

Technology should be used as a tool to challenge, expand, and enhance teaching and learning. Allegan Public Schools students will be given the opportunity to learn to use technology as a tool for gathering, using, and manipulating information, as well as for communication and creative expression. Students and staff must also understand the impact of technology upon society and accept the responsibilities and restrictions associated with the acceptable use of technology tools (as outlined in the district's Technology Acceptable Use Agreement/Users Responsibility Declaration - Administrative Rule #7200-R).

Student Internet Use and Safety

Pursuant to state statute (MCL 397.606(6)) and federal law (H.R. 4577), the Board of Education requires when a school district library offers use of the internet or a computer, computer program, computer network, or computer system to the public, that access to minors be restricted. Further, any district computer used by students shall have Internet filtering software in place, either on the computer itself, or on the server through which the computer accesses the Internet.

District staff shall not allow students to use any computer in the district with Internet capability that does not have Internet filtering software. This includes any computer, laptop or desktop, in the district's libraries or media center, classrooms, laboratories, or offices where students are, for any reason, allowed to use a computer or any other such device with Internet access. In addition, district staff

[Last Revised: 12/14/11]

are required to permit Internet access to students only if an adult staff member is present, and the district has on file an Users Responsibility Declaration which has been signed by the parent and the student.

The use of the Internet by students or staff shall be strictly for the purpose of furthering the educational mission of the school district--enhancing learning opportunities, resource sharing, innovation of ideas, and improving communication through access to the World Wide Web. Neither students nor staff members are to use the school Internet for unlawful purposes, for personal monetary gain, or for viewing any displays that are obscene or pornographic.

Students will be educated regarding appropriate online behavior including interactions with other individuals in social networking websites and chatrooms; and they will be made aware of safety issues such as the protection of their personal information/data on the Internet and cyberbullying.

Email and Social Media

Staff members are responsible for modeling good behavior on school computers/networks and on the Internet, just as they are in the classrooms and at school events. As communication devices and various means of Internet connections evolve, communication via the Internet will take many forms. Staff members should use extreme caution in all Internet communications (email, blogs or responses

Policy #7200 – Page 2

to blogs, chatrooms, social media sites, or any other form of information sharing) understanding their personal responsibility for all content they publish. Staff should be mindful that they represent the School District when navigating and communicating via the web, either while on the job or off.

District Web Page

The Board of Education authorizes the creation of web sites by employees and students of the School District to be published on the World Wide Web. The creation of web sites by students must be done under the supervision of a professional staff member. These web sites must reflect the professional image of the District, its employees, and students. The content of all pages must be consistent with the School District's Mission Statement, Belief Statement, School Improvement Process, and educational philosophy. The Superintendent and Director of Technology will have final authority over content that is displayed on, or linked to, the Allegan Public School's official web page.

The purpose of the web site is to educate, inform, and communicate. The following criteria should be used to guide the development of such web sites:

1. Educate – Content provided in the web site should be usable by students and teachers to support the curriculum and School District objectives.
2. Inform – Content may inform the community about the school, teachers, students, or departments, including information about curriculum, events, class projects, student activities, and departmental policies.
3. Communicate – Content may provide an avenue to communicate with the community.

All links included on the web pages must also meet the above criteria. Under no circumstances is a web site to be used for commercial purposes or to provide financial gains for any individual.

Pages should reflect an understanding that both internal and external audiences will be viewing the information.

School web sites must be located on district-affiliated servers.

The superintendent shall prepare administrative guidelines defining the standards permissible for web site use.

Legal Reference: Children's Internet Protection Act (CIPA) of 2001; Protecting Children in the 21st Century Act of 2008.

First Reading: 12/11/95

Adopted: 1/8/96

Revised: 7/1/99, 3/13/00, 3/12/01, 12/12/11

Technology Code of Ethics

Use of technology at Allegan Public Schools is a privilege extended to students, faculty, and staff to enhance learning and exchange information. Each user of technology shall read the following ***Rights, Responsibilities, and Disciplinary Action*** statements and sign the ***User's Responsibility Declaration*** form which follows, prior to accessing and using technology.

RIGHTS:

- Users have the right to use all authorized hardware and software for which they have received training to facilitate learning and enhance educational information exchange.
- Users have the right to access information from outside resources which facilitates learning and enhances educational information exchange.
- Users have the right to access the Internet to retrieve information which facilitates learning and enhances educational informational exchange.
- Users have the conditional right to sign up for Listserves and Newsgroups on the Internet which facilitate learning and enhance educational information exchange.

RESPONSIBILITIES:

- Users are responsible for utilizing technology in the school only for facilitating learning and enhancing educational information exchange consistent with the purposes of the school.
- Users are responsible for properly using and caring for that hardware and software which they have been trained to use and refraining from using any technology for which they have not received training.
- Users are responsible for adhering to the rules established by the technology facilitator for use of the hardware, software, labs, and networks in the school.
- Users are responsible for obtaining permission from the technology facilitator before bringing in their own software and using it on school equipment.
- Users are responsible for preventing knowingly installing computer viruses on school equipment.
- Users are responsible for keeping hardware and software from being relocated, removed from school premises, or modified without permission from the technology facilitator.
- Users are responsible for adhering to the printer use guidelines established by the technology facilitator.
- Users are responsible for maintaining the privacy of passwords and are prohibited from publishing or discussing passwords.
- Users are responsible for all material received via the Internet under his/her user account and accepts responsibility for keeping all pornographic material, inappropriate text files, or files dangerous to the integrity of the school's network, equipment, or software from entering the school via the Internet. Any suspected viruses or potentially dangerous emails must be reported immediately to the technology facilitator.
- Users are responsible for maintaining the integrity of the electronic mail (e-mail) system, reporting any violations of privacy. Social networking or blogging during scheduled work time shall be limited to postings that promote the educational mission of the school district or enhance communication to district stakeholders.
- Users are responsible for adhering to the copyright guidelines in the use of hardware and software and in the transmission or copying of text or files on the Internet or from other resources.
- Users are prohibited from the malicious use of the technology to disrupt the use of technology by others, to harass or discriminate against others, and to infiltrate unauthorized computer systems.

DISCIPLINARY ACTION

- Users violating any of these Rights and Responsibilities will face disciplinary action.
- Users violating any of these Rights and Responsibilities may be banned from using school hardware and telecommunications software to access the Internet.
- Users will be required to make full financial restitution for any unauthorized expenses incurred or any damages caused.

[Last Revised: 12/14/11]

- Users who wish to continue using school hardware, software, and Internet access may be required to attend additional training sessions in their use for any unauthorized use of these technologies.
- Users violating any of these Rights and Responsibilities may face additional disciplinary action deemed appropriate in keeping with the disciplinary policies and guidelines of the school.

USER’S RESPONSIBILITY DECLARATION

I have read the attached Allegan Public Schools District Technology Code of Ethics, and agree to be responsible for and abide by all the Rights, Responsibilities, and Disciplinary Action outlined.

(User’s Signature)

(Date)

(Parent/Guardian’s Signature)

(Date)

Approved: 1/8/96
Reviewed: 7/1/99
Amended: 12/12/11