

Pathway to the Future

Technology Plan
2006 - 2009

Moravia Central School District

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Vision:

Literacy in technology provides our students with access to an ever-changing world dependent on information. In order to participate in our technological age effectively, our students must be information navigators, critical thinkers and analyzers, creators of knowledge and communicators using a variety of technologies. Integrating technological instruction throughout the curriculum provides the essential skills to meet state and national learning standards. The educational gains include:

- *improved work ethic*

Because of access to additional technology and resources, teachers and students have all raised their level of work.

- *expanded resources*

In addition to traditional print resources that continue to be an asset to our educational program, students and staff have access to current information that was never available before. Students can now visit another country, browse a museum or view an artifact from local school facilities. Kindergarten through third grade classroom and reading teachers and Kindergarten through twelfth grade special education teachers will expand their knowledge of instructional strategies that are research based in the area of Reading by participating in the on-line New York State Reading Academy.

- *discovery opportunities*

Students have more opportunities to expand their exploration. Whether through the use of a multimedia CD-ROM, a primary level math exercise or a high school level Internet-based quest, students can allow their natural inquisitiveness to take them into new learning opportunities.

- *positive impact on the writing process; motivation; willingness to improve work*

Students work to improve their writing skills through proofreading and using tools including spell checker and the thesaurus in word to programs that help them write including Inspiration that are available to assist them in this process. Students are more interested in correcting their errors by using technology rather than redoing an entire project.

- *even playing field among different student ability levels and demographics*

The integration of technology into our learning process has had a positive effect in creating a level playing field for all of our students. Many students who struggled with the mechanics of writing are much more comfortable at a computer or keyboard. The various tools that are available to assist students with special needs have improved their opportunities to be at the same level as that of their typical peers as required by the New York State Learning Standards. Students who do not have computers available to them at

home can experience the benefits and opportunities provided by our expanded resources. In the upper grades, students may take advantage of the after school library program to make use of technology and other resources. A mini-lab in the elementary library and recently upgraded provides this resources to students both after school and during school hours.

- *increased interdisciplinary projects*

As a response to the New York State Learning Standards, students and staff are working more collaboratively on projects. Technology integration has made this possible. A student can develop a PowerPoint presentation in the Computer Business Applications class for their English research project. Elementary students develop higher level thinking skills while honing their Internet search skills for a social studies project. A foreign language class can view and research a location or artistic item of interest in the language they are studying. As a result, their exposure to native dialects is more realistic than possible from many texts.

- *sharing of information*

More information is available to more people with less effort than ever before. E-mail is used throughout the district to increase communications and reduce the use of paper. Many documents are shared electronically with only final copies printed for distribution. The access to the Internet has made current information readily available to students and staff. The elementary, middle/high school buildings and the bus garage are connected through a wireless bridge. The bus garage is connected to the Internet via our local cable service. Over the 2004-05 school year, we are researching an upgrade to the phone system for our elementary school building. In addition, our security surveillance system is connected to our local village police office. We have helped to improve their system through connecting them to our cable system through the bus garage location.

- *a new way of learning*

Distance Learning has been incorporated into the high school curriculum. We currently offer four courses. It is our goal to increase this program by one new course per year. We are moving away from the traditional textbook and lecture style of teaching. Students are working collaboratively. They are developing and making presentations. They are preparing themselves in a completely new way for the world of higher education or employment. They are using industry standard software in Computer Business Applications, Yearbook, Graphic Arts, Physics, Math, Social Studies, Computer Aided Design and many more.

Mission:

The mission of the educational community of Moravia is to provide all students with a high level of academic skills and to prepare them for lives of vision and consequence in the 21st century. We will provide a positive learning environment, challenging each individual to cultivate the highest traits which are distinctly human: reason, creativity, curiosity, and compassion. This community is committed to:

1. Enhancing the intellectual, social, emotional and physical well being of each student.
2. Providing each student with a solid base of knowledge and the skills needed for further inquiry and participation in a global society.
3. Preparing each student to confidently address inevitable change.
4. Teaching the methods of maintaining peaceful and humane relationships with the world's inhabitants.
5. Fostering responsible, effective and creative communication.
6. Maintaining a program and environment that draws out the artist, musician and poet in each student.

The staff, Board of Education, students, parents and community share the responsibility for this mission.

Technology Support:

We have added, and will continue to add, computers, hardware, and software at all levels. In addition, we will continue to upgrade our infrastructure as funds become available. With additional equipment needs, and teacher and student needs, there is a need for additional technology support including technicians and lab aides.

Material Gains:

Advancements made include:

- ◆ *nearly 300 new and updated computer systems introduced to the district*
- ◆ *network infrastructure in place in all buildings of the district*
- ◆ *upgraded telephone system in the High School and Elementary School*
- ◆ *library automation services in both buildings*
- ◆ *interactive whiteboards*
- ◆ *improved efficiency in maintenance and sharing of data and networked administrative software*
- ◆ *new and updated computer labs at the High School, Middle School, and Elementary School*
- ◆ *shared classroom laser printers in many wings of both schools*
- ◆ *CD recording capabilities in both buildings*
- ◆ *Internet capabilities to all networked systems with e-mail capabilities to staff members*
- ◆ *increased access to advanced presentation equipment*
- ◆ *increased technology support personnel and staff development opportunities*
- ◆ *increased community communication through use of a school website*
- ◆ *technology-based security system with local authorities*

Network Topology/Protocol:

The Moravia Central School District currently employs several different technologies to create an enterprise backbone. The backbone is a combination of Switched Ethernet (802.3) and Wireless (802.11a and 802.11g). Several subnets are created to provide a more efficient and collapsible backbone. The backbone serves approximately 12 servers, 225 workstations and 30 IP networked based security cameras. Connectivity to the Internet is provided by BOCES via a T1 connection. Interconnectivity between the elementary and high school is provided by a wireless connection. Segments or subnets have been created based upon location and function. Currently IPX/SPX and TCP/IP are the main protocols. Both provide a routable connection to file and print services as well as remote connectivity. The district has provided at least 1 home run Switched Ethernet connection to each classroom. Many classrooms at the high school have 3. In areas that contain sealed asbestos, wireless technology is used to provide a connection to the backbone. Wired closets have been created to supply a secure reliable and scalable network infrastructure. These closets include storage racks for servers as well as network products. Backup power is supplied via modular Uninterruptible Power Supplies (UPS).

Network Security:

Network security is provided by several firewall technologies. Application and packet based. The firewall product used by the Moravia Central School District is Check Point's Firewall 1. This is a server-based product that runs on a Windows 2003 based Server. All connections from the backbone are routed through the firewall. Due to remote access requirements such as School Information Systems (SIS) and IEP writer, Moravia uses Network Address Translation (NAT) to create file and print access points. Student access is limited by a proxy filter. This is a rules based proxy server that intercepts all HTTP and FTP requests. The intercepted traffic is analyzed. Traffic is then cached to the proxy for peek optimization of the T1 line. The cached page information is then passed on to workstations if no rule is violated.

Virus Protection:

Virus protection is provided by Symantec's Antivirus Enterprise edition software. This software is resident on all servers and workstations. Updates are provided automatically on a daily basis.

Hardware:

The standard computer system of choice will be a PC-compatible system. The standard computer system will be the type of system for all future purchases in the Moravia Central School District. Exceptions to this guideline will be in an area where the industry standard would dictate otherwise. Those who use non-standard systems will do so with the understanding that some features available to others on school owned systems and networks may be unavailable on these non-standard systems.

In general, new computer systems purchases will be made with the following priority list in mind:

1. availability of state and school funds
2. classrooms with computers that cannot support the application standard
3. labs updated on a rotation basis every four years
4. classroom mini-labs

Software:

The standard application package in the district is currently Microsoft Office version 2003 for the PC and Version X for the Macintosh. Additional software purchases will be approved as part of the normal purchasing process by the Technology Coordinator. Purchase approvals will be prioritized by their alignment with curricular goals and maximizing the number of students impacted by the purchase. Building principals will be consulted in the purchase priorities of software package to determine curriculum alignment.

Under no circumstances will the district tolerate unauthorized installations of software packages. Neither students nor staff members have the legal right to install software brought from home or duplicated without proper licensing from the software publisher.

Needs Assessment:

The staff was surveyed in the 2003-04 school year. As a result of the survey, an additional full-time technology coordinator was identified as a need and built into the 2004-05 budget. In addition, computer lab aides were identified as a need and will be built in over the next three years. Staff identified areas of training needed. This training was offered at the fall 2004 superintendent's conference day. Additional training is offered through our local Teacher Center and BOCES. The surveys also identified what equipment was in each classroom and where additional equipment is needed. Prioritized lists have been submitted for the 2004-05 school year. The survey also indicated a top priority, which is to improve our elementary phone system. That phone system was updated in the 2005-06 school year. The majority of the staff has a very basic knowledge and skill of the use of computers and other technologies. The direction for staff development will focus on integration into the classroom with the implementation of our new technology coordinator, BOCES staff development and the Teacher Center staff development. Create a survey over the summer for an evaluation process which will help Moravia to know the technology goals are being met.

Staff Development/Curriculum Integration

a. Instructional Technology Coordinator:

This position is currently filled by a Certified Technology Teacher hired through civil service and will include working within the classroom setting with teachers and students in helping to implement teaching strategies employing instructional technology as well as other non-teaching duties. The position does not include dissemination of AV media and equipment currently managed by building Library Media Specialists.

The instructional Technology Coordinator is directly responsible to the Superintendent and is also responsible for coordinating his efforts with each of the building principals for the programs in their buildings.

The Instructional Technology Coordinator:

- Is a member of the District Instructional Technology Planning Committee. A progress report on the Technology plan will be presented by the Technology Coordinator to the Board of Education on an annual basis or as requested by the Board.
- Will maintain knowledge of current trends in the use of instructional technology in schools. This includes availability and capabilities of computer hardware & software as well as other instructional technology hardware & software such as video disk, CD-ROM, video projection equipment etc. This may be accomplished in part by attending regional, statewide & national meetings related to instructional technology issues.
- Serves as a liaison between Moravia Central School District and other districts, BOCES, other educational institutions as well as technology suppliers.
- Conducts awareness sessions for district staff to keep them abreast of availability of new instructional technologies.
- Helps develop & implement a district wide in-service program to maintain staff competencies with instructional technologies. This may be accomplished through: formal in-service courses (both within and outside the district); informal training sessions; and development of building peer support groups for the use of instructional technology.
- Works with staff members to help in implementing instructional activities employing instructional technologies within their classrooms.
- Will develop a budget for District Instructional Technology based on requests from district staff & administration as well as the District Long Range Technology Plan. Manage requisitions, bids, ordering, and distribution of instructional technology hardware and software.
- Will maintain an inventory of district instructional technology hardware and software.
- Assists in the maintenance and operation of the district's network and equipment.

b. Network Administrator:

- Will maintain all administrative servers (e.g. District data, Student Information Systems and Finance Server).
- Will maintain the authentication server for the administrative network maintains user accounts on the network.
- Maintains the hardware for administrative network and all administrative workstations
- Provides instruction to administration staff on computers, the programs, and peripherals used at their workstations.
- Provides primary maintenance of the network hardware on the instructional network.
- Trains students and teachers how to access accounts for terminal services.
- Provides support for upgrades of software for teachers instructional use.
- Provides the primary installation, deployment and repair of Windows workstations for teachers.
- Ensures disaster recovery procedures are in place.

c. Building Technology Representative:

The high, middle, and elementary schools principals will appoint representatives from the buildings. These representatives shall meet as necessary to:

- Act as a liaison between the Technology Coordinator and the District Technology Committee and the faculty and staff in their building.
- Evaluate the technology needs within the building and communicate these needs to the Technology Coordinator and the District Technology Committee.

d. District Technology Committee:

This committee is responsible for the development and implementation of the district's Long-range Technology Plan. The committee will work in conjunction with all other district-wide planning committees (e.g. EAP, Shared Decision Making, EAC, etc.) to coordinate their efforts. The committee is comprised of

- The Superintendent
- The Business Manager
- The Director of Special Education
- The Instructional Technology Coordinator.
- Network Administrator
- Two representatives of each building. These members will include a diversity of faculty and administrative staff. The members of the building technology committees will be represented in this body.
- This committee will meet monthly, or as often as deemed necessary.

e. Lab Teaching Assistants:

The Computer Lab Teaching Assistants will be the individuals in charge of the student use computer labs in each building. They will be responsible for the basic maintenance of the lab as well as:

- Assisting students in the use of technology
- Assists faculty and staff in the use of technology
- Training staff in software & hardware use
- Assist staff in planning for technology integration
- Basic network account maintenance (managing student accounts, groups, passwords, etc.)
- Basic first level troubleshooting of computers in the labs

f. Adult Literacy:

- There is no current plan to utilize or collaborate with adult literacy service providers.

g. Public Library:

- At the current time, public libraries will only be included in the planning and implementation on an as needed basis.

Curriculum Planning:

Research consistently shows that teacher knowledge and ownership are critical factors in determining whether technology programs achieve their desired results. Teachers should not only be introduced to the technology, but also provided with models and guidance in how to effectively integrate technology resources into their instruction.

The improvement of teaching and learning is the single most important goal in our district's technology plan. Moravia Central School believes that introducing technology into our district creates a more effective learning environment and is an effective tool for assisting in the improvement student achievement.

Goal:

Teachers will use technology as an instructional tool to promote student learning and achievement in all areas of study.

Currently:

Moravia Central School has created a technology curriculum team that is developing benchmarks for K-12 which is in alignment with the New York School Standards and Assessments. The committee using the National Education Technology Standards for students created a working document for teachers to integrate technology in to the current curriculum. The document is grade based benchmarks. (see appendix A)The committee will deploy the document to teachers starting in the year 2005-06. This committee will monitor the progress and make adjustment to better spread the use of technology in Moravia's school district.

Action Plan:

At Moravia, we believe that the integration of technology throughout all areas of the curriculum is a critical component of an engaged learning environment. Our curriculum documents provide the space for a tie between technology use and existing classroom instruction, but there is a need to ensure that all students are provided equal opportunity to use technology as a tool for learning.

1. Our district-wide technology committee will work closely with each building to:
 - Have teachers provide curriculum ideas using technology.
 - Provide the technology skills needed to develop and share curriculum documents.
2. Design and implement a process for monitoring and documenting staff participation in professional development activities. This process will provide the district with an understanding of the level of competencies and information needed to support our staff.

Evaluation:

Based on the use of technology in the classroom teachers will fill out a survey outlining what technology is available to them and how they used it in the classroom. Part of the survey will ask what additional items are in the form of technology which will help them become better teachers with technology.

Teacher, Administrator & Instructional support staff training:

Moravia Central School believes that it is critical for all teachers to have the basic skills and knowledge to provide students with the opportunity to use technology as a tool for learning and communicating.

Goal:

The ultimate goal of our staff development process is to increase student achievement and provide the knowledge and skills to teachers in order to impact school improvement. Our district will continue to provide many staff development opportunities focusing on application specific skills, support/productivity tools, and more curricular integration training.

Currently:

Moravia Central School District supports integration of technology into the educational setting with staff development for all teachers. The current Curriculum Plan for the Moravia Central School District includes technology training in an ongoing manner. This Technology Plan emphasizes the importance of staff development in order to facilitate new methods of teaching and learning in our school. Currently the following assists the district in reaching our goal of making technology yet another tool and resource in the classroom in order to facilitate our new way of learning.

- New York State Reading Academy
- After school mini-sessions
- Reading First Grant for kindergarten through third grades
- Teacher Center sponsored sessions in the Moravia Central School District
- Encouragement and support of attendance at technology conferences
- Yearly demonstration or expositions of technology already in use by our local staff
- Sample lesson plans using technology integration published and distributed in-house to facilitate others who are attempting to move in this direction.
- Contract with BOCES for technology based staff development personnel to serve as model or co-teachers in lessons where technology integration is practical
- Develop curriculum benchmarks for student technology skill attainment
- Encourage and explore the use of the virtual learning space

Evaluation:

To evaluate our goal of the staff development process Moravia is building a survey that will be given in the beginning of the year to give us a baseline for teacher's abilities in technology. Midway through the year the baseline will be returned and teachers will evaluate how it is working for them and make adjustments. We will also evaluate how many teachers have participated. At years end Moravia will develop a plan for the following year to better increase the teacher knowledge of technology. The mid year survey will also give a better stepping stone to change if it is not working and allow room for more focused training for the rest of the year.

Current Year:

Below is the action plan currently in force at Moravia.

- Writing of Technology Benchmarks
- Every classroom connected to the internet
- Online grading for High School and Middle School with SIS
- Update computer equipment on an ongoing basis
- Increase Internet bandwidth to accommodate use by both buildings
- Technology support sessions
- Support Teacher Center technology training at the Moravia Central School
- Upgraded wiring and infrastructure system to both buildings
- Installation of network based security cameras in all buildings
- Encourage enrollment and explore the use of the virtual learning space
- Updated FileMaker Pro for Individualized Educational Plans
- Contact with BOCES for technology-based instructional development program
- Entrance and Exit review of faculty/staff needs-assessment for technology training
- Technology Committee which reviews Technology throughout the buildings, plans, and reassesses Moravia' needs for tomorrows technology.
- Presentation to Board of Education

Year 2 2007-2008:

- Implementation of Technology Benchmarks
- Training for Technology Benchmarks
- Update computer equipment on an ongoing basis
- Technology support sessions
- Support Teacher Center technology training at the Moravia Central School
- Add bus garage to network via wireless connection
- Provide more courses through Distance Learning room
- Contract with BOCES for technology-based instructional development program
- Encourage and explore the use of the virtual learning space
- Upgrade telephone system at the elementary building
- Annual review of faculty/staff needs-assessments for technology training
- The Technology Committee meets mostly to review progress of Technology Plan and reassess needs.
- Presentation to Board of Education

Year 3 2008-2009:

- Update computer equipment on an ongoing basis
- Expansion of Distance Learning courses and services
- Support Teacher Center technology training at the Moravia Central School
- Contract with BOCES for technology-based instructional development program
- Encourage and explore the use of the virtual learning space
- Technology support sessions
- The Technology Committee meets to review progress of Technology Plan and reassess needs.
- Presentation to Board of Education
- Develop a new technology plan

On Going:

The district includes the effective use of technology in the classroom and is accomplished in several ways. Our professional development process starts with new staff members participating in a three day orientation to include technology training with current operating system software and classroom management tools. To stay current with the rapid change in technology and instructional models, our staff members participate staff development days each year and may participate in the following additional offerings:

- in-service courses
- conferences
- BOCES and other off-campus services
- individual support by expert colleagues

These opportunities ensure that our staff is continually trained and our topics are updated, evaluated, and renewed. All topics strive to match our curriculum goals and provide an instructional tie to the New York State Standards. However, many of these opportunities are elective and some staff is more technologically literate than others.

Action Plan:

1. Focus on providing staff development; which help teachers' embrace technology by:
 - Teaching classroom strategies that focus on integrating the technology into their existing instructional plan.
 - Encouraging teachers to include technology activities into their curriculum planning and standards by initiating an annual evaluation process.
2. We will provide the necessary staff development to support staff with developing competencies with existing and new technologies to include:
 - Maintaining a working knowledge of the computer system.
 - Integrating technology into classroom instruction and communicating expectations to students.
 - Communicating and collaborating with colleagues.
 - Monitoring, analyzing, and adjusting instruction and student outcomes.
3. Based on the National Educational Technology Standards for Teachers, we will identify and implement district-wide technology benchmarks for all teachers.

National Educational Technology Standards for Teachers – All classroom teachers will follow standards and performance indicators.

Technology Operations and concepts:

Teachers demonstrate a sound understanding of technology operations and concepts. Teachers will:

- Demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Educational Technology Standards for Students).
- Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

Planning and Designing Learning Environments and Experiences:

Teacher 's plan and design effective learning environments and experiences supported by technology. Teachers will:

- Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- Apply current research on teaching and learning with technology when planning learning environments and experiences.
- Identify and locate technology resources and evaluate them for accuracy and suitability.
- Plan for the management of technology resources within the context of learning activities.
- Plan strategies to manage student learning in a technology-enhanced environment.

Teaching, Learning, and the Curriculum:

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning. Teachers will:

- Facilitate technology-enhanced experiences that address content standards and student technology standards.
- Use technology to support learner-centered strategies that address the diverse needs of students.
- Apply technology to develop students' higher-order skills and creativity.
- Manage student learning activities in a technology-enhanced environment.

Assessment and Evaluation:

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers will:

- Apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- Apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

Productivity and Professional Practice:

Teachers use technology to enhance their productivity and professional practice. Teachers will:

- Use technology resources to engage in ongoing professional development and lifelong learning.
- Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- Apply technology to increase productivity.

- Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

Social, Ethical, Legal, and Human Issues:

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply that understanding in practice. Teachers will:

- Model and teach legal and ethical practice related to technology use including academic honesty.
- Apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- Identify and use technology resources that affirm diversity.
- Promote safe and healthy use of technology resources.
- Facilitate equitable access to technology resources for all students.

5. Other resources – The district will utilize other resources as required. These resources include, but are not limited to, BOCES, teacher centers, and consultants.

Support & Maintenance:

Technology support & maintenance are provided by a number of individuals throughout the district.

The Technology Coordinator and Network Administrator provide primary support for the infrastructure, hardware and software within the District.

Technology Coordinator: This individual is the secondary System Administrator on the PC OS Server which includes Cafeteria, Financials, Administrative, and Student servers and Student and Admin Faculty email and helpdesk servers. This encompasses the Elementary, Middle and High Schools, District Office and Bus Garage buildings This person provides back-up, installation, deployment and maintenance roles, including service calls, training staff, curriculum work and student instruction.

Network Administrator: This individual maintains all administrative servers (e.g. District data, Student Information Systems and Finance Server). This person maintains the authentication server for the Administrative network and maintains user accounts on the network. He also maintains the hardware for the administrative network and all administrative workstations, to include installation, deployment and repair of the equipment & software. He provides primary maintenance of the network hardware on the instructional network. This individual also maintains the Win 2000 Server on the instructional network as well as managing student accounts via terminal service. He also is the primary provider of installation, deployment and repair of Windows workstations.

Computer Lab Teaching Assistant: Currently provides primary software support to teaching staff & students in the elementary building. She monitors student use of computers and in many cases assists in teaching students the use of various software packages. She is also responsible for basic maintenance (dusting, cleaning) of hardware in the lab and is involved in the management of student workgroups and software access on workstations in the building.

OCM BOCES: CAYUGA ONONDAGA BOCES provides support for us in several ways. Repair and warranty service for HP hardware. This service is provided off site at the Thompson Road BOCES center. Network & Internet connectivity is provided through a DS3 which gives 2 megs of pipeline connectivity with a 17 meg pipe expansion. We use the SIS service throughout all of our buildings. Our cafeteria service utilizes the Win Snap program. The Library Automation and Library Databases, Internet education learning, model schools, and distant learning are provided by the Cayuga Onondaga BOCES.

Alliances and Partnerships:

Cayuga-Onondaga BOCES utilizes our Distance Learning classroom as a site for an adult GED program. Our High School library is staffed additionally after school hours for community use and use of the Internet. Our local Teacher Center and BOCES offers staff development for adult learners in our middle/high school computer labs. The Reading First Coach offers staff development through the Reading First Grant.

Funding:

Funding for various projects of the technology plan will be derived from several sources. First of all, the general budget will support hardware and software purchased through state aid provided each year. With the consolidation of these funds into a district budget, volume purchasing is now possible on many items, thus stretching available dollars. In addition, the district continues to seek outside funding and subsidies through programs such as Universal Service Fund (e-rate), AT&T Points for Schools program, BOCES, and various grant programs. In addition, staff development funding sources will include general budget curriculum development as well as various outside funding sources intended solely for this purpose.

Category	2005-2006	2006-2007	2007-2008	2008-2009	Source of Monies
Software	\$30,880	\$30,880	\$30,880	\$30,880	General Fund/ NY State Aid
Hardware	\$32,000	\$32,500	\$33,000	\$33,500	General Fund/ NY State Aid
Maintenance of Distant Learning Room	\$32,000	\$34,000	\$8200	\$8200	General Fund
Professional Development	\$21,000	\$25,000	\$25,000	\$26,000	General Fund/ Grants
Internet Connectivity	\$14,000	\$14,000	\$14,300	\$14,300	General Fund/ E-rate
Network Infrastructure			\$1,235,000		Building renovation plan
Internet Connectivity Status	2 Meg Pipeline	2 Meg Pipeline	3 Meg Pipeline	3 Meg Pipeline	General Fund/ E-Rate
Rooms with access	All	All	All	All	All
Computers with access	All	All	All	All	All
Rooms without access	None	None	None	None	None
Computers without access	None	None	None	None	None

Moving On:

This plan is for a three-year period. This will provide for flexibility in the fast changing pace of the technology field. We have developed a strong infrastructure to enhance the learning opportunities for our students. It is now time to develop the curriculum integration that is crucial to putting this hardware to the most effective use possible. By using this document as a guide for the next three years, we will make that step. This is the plan that moves us forward.

There is currently a technology committee in place that assesses the technology needs for the district on a monthly basis. The review of the technology plan is an on going process that is reviewed in the midyear to confirm the forward movement of the plan and to make changes when needed. During the 2004-2005 academic year, the addition of a technology coordinator with the primary purpose of technology staff development will provide the opportunity for direct contact with staff and evaluation of the integration level of education technology through co-learning, observation and model teaching directly in the classroom. When combined with our extra-classroom staff and development opportunities we will have a broad basis upon which to evaluate the use and effectiveness of technology in our educational programs.

Current Inventory:

A current inventory was done for this Technology Plan and will guide us in purchasing new equipment and help in keeping technology current in the district. Included is a timeframe for acquiring new equipment.

Technology Assessment Inventory

Computers	Labs	Classroom	Library	Admin	Other	Planned	Purchases	
						Year 1	Year 2	Year 3
IBM	0	10	0	6	0			
HP	75	60	10	11	0	25	25	25
Dell	0	10	0	0	0	10	10	
PowerPC	0	10	0	0	0			
iMac	5	6	5	0	0			
Apple	0	0	0	0	0			
Desti	3	8	0	0	0			
Generic	25	6	0	0	0			
Internet ready	All	All	All	All	NA			
Multimedia ready	All	All	All	All	NA			

Peripheral Devices	Labs	Class room	Lib	Ad min	Other	Planned Future Acquisitions		
						Year 1	Year 2	Year 3
						A. Printers	9	60
B. Scanners	4	2	1	0	0	2	0	0
C. Modems (below 28.8 Kbps)	0	0	0	0	0	0	0	0
D. Modems (28.8 Kbps or above)	0	0	0	3	0	0	0	0
E. Assistive/Adaptive Devices	0	3	0	0	0	0	2	0
F. Digital Cameras	0	3	0	4	2	1	2	5
G. TV Monitors	2	0	0	1	0	2	2	2
H. VCRs/Laser Disk Players	0	10	1	0	0	0	0	0
I. Projection Devices	2	16	0	0	0	8	16	32
J. Satellite Dishes	0	0	0	0	0	0	0	0
K. Video Cameras	0	0	0	0	2	2	0	2

Software (list by type)	Labs	Class	Library	Adm in	Other			
A. MS Office XP	ALL	ALL IBM	ALL	ALL				
B. MSOffice 98 (Mac)	0	ALL MAC	0	0				
C. FileMaker Pro	0	0	0	0	25			
D. Numbers Uncovered	Site Lic.							
E. Tenth Planet Literacy	Site Lic.							
F. Oregon Trail II	5							
G. Memory Fun	Site Lic.							
H. Journey of Zoom.	5							
I. Kid Pix	Site Lic							
J. Print Shop Deluxe 5	Site Lic							
K. Timeliner 5.0	Site Lic							
L. Inspiration 5.0	50							
M. MapMaker 5.0	Site Lic.							
N. Adobe Pagemaker	10							

Network Equipment	Labs	Classroom	Library	Admin	Other	Year 1	Year 2	Year 3
A. Hubs	4	10	0	0	25	5	5	0
B. Routers	0	0	0	0	3	1	0	0
C. Servers	0	0	0	0	11	1	2	2
D. Switches	2	6	5	0	8	0	0	0
Number of rooms wired for internal connections	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
Telecommunication Links								
A. Pipeline	2 MB	2 MB	2 MB	2MB		3MB	3MB	3MB
B. ISDN								
C. Dedicated cable/microwave				X				
D. Phone Service	X	X	X	X				
E. Wireless point-to-point					11MB			

Our need for hardware in Moravia is expanding with the integration of teacher, administrator, and instructional support training to include upgrading computers for every teacher's workstation. Some upgrades will come in the form of new software packages while others will get new computer. Software packages like the Inspiration will be upgraded to accommodate teacher workshops and integration for students. Moravia is looking to upgrade each lab with new computers and upgrade on average 25 teacher's workstations per year. Software purchases to build integration into the classroom will be purchased as they become available. One big component is the data projectors. Moravia will increase the amount of projectors each year by double with the goal to have one in every teacher's room.

Affirmation of Support:

The members of the Technology Committee of the Moravia Central School District affix our signatures as a sign of support for A Pathway to the Future.

Vicki Cable, Teacher

Chris Fisher, Director of Special Education

Greg Jenne, Assistant Principal

Shelly Johnson, Computer Aide

Erica Leach, Teacher

Patricia Shaw, School Business Manager

Karen Speck, Teacher

Michael Thomas, Teacher

William Tammaro, Superintendent of Schools

Appendix A

Moravia Central School Technology Integration Benchmarks May 2005

Kindergarten

Students work in computer centers. (ISTE 1 & 3)

- Utilize a broad range of software that reinforces all curricular areas
- Display awareness of how to turn computers on/off, and display basic skills such as manipulating the mouse and identifying when and what is appropriate to print
- Display proper care of the computer by using only hands, not having food or drinks in the computer center and other teacher specific classroom procedures
- Display awareness of computer components such as monitor, keyboard, mouse, printer and hard drive

Grade 1

Students work in computer centers. (ISTE 1 & 3)

- Utilize a broad range of software that reinforces all curricular areas
- Utilize shortcut icons
- Recover from the screen saver

Students create documents using word processing skills. (ISTE 1 & 3)

- Type upper and lower case letters and numbers
- Use delete, backspace, space bar, and return/enter keys
- Save work to a personal network folder

Students utilize online curriculum related resources as designated by classroom teachers (online dictionaries, encyclopedias, and math help). (ISTE 3)

Grade 2

Students work in computer centers. (ISTE 3 & 4)

- Use appropriate curriculum related software
- Access teacher designated websites

Students create publication with appropriate software that uses text and graphics (See current attached list). (ISTE 1 & 3)

- Utilize writing/word processing skills by:
 - Using spell/grammar check
 - Inserting correct spacing in between words and sentences
 - Inserting correct punctuation
 - Centering titles
 - Changing font color, sizes, and styles
 - Inserting graphics
- Access school network
- Save work to a personal network folder

Students collaborate with other students on a class presentation project that communicates a specific subject area topic. (ISTE 4)

- Generate a slide that includes text and student made graphics
- Students utilize online curriculum related resources and electronic encyclopedias designated by the classroom teacher (online dictionaries, encyclopedias, and math help). (ISTE 4 & 6)

Grade 3

Students create a publication with appropriate software. (ISTE 1, 2, 3, & 4)

- Use proper keyboarding skills
- Import graphics from a variety of sources to enhance communication
- Develop an awareness of unethical issues involving plagiarism

Students employ multimedia software to demonstrate research and display acquired knowledge as a result of a classroom unit of study. (ISTE 3)

- Identify and choose from a variety of visual options to graphically enhance presentations

Students display Internet skills through the navigation of teacher guided World Wide Web resources (i.e. treasure hunt, WebQuest, Internet Hot List). (ISTE 5)

- Follow Internet safety precautions

Students participate in a class-based electronic community where classes learn about others by trading information via email and attachments. (ISTE 4)

Students participate in a teacher designated unit of study to gather information to develop strategies to solve problems and make informed decisions. (ISTE 2, 5, & 6)

- Analyze human impact on global issues
- Identify and evaluate personal health and safety issues

Grade 4

Students create publications with appropriate software. (ISTE 1, 2, 3, and 4)

- Use proper keyboarding skills
- Import graphics from a variety of sources to enhance communication
- Utilize the electronic spell/grammar check and thesaurus to improve final products
- Practice ethical behavior associated with plagiarism

Grade 4

Students employ multimedia software to demonstrate research and display acquired knowledge as a result of classroom study. (ISTE 3 & 4)

- Utilize scanners and digital cameras to import images that graphically enhance presentation

Students carry out Internet research through a variety of web mediums (i.e. WebQuest, Web treasure hunts) that require the acquisition of information and utilization of information through higher-level thinking skills. (ISTE 5 & 6)

Students independently email others to gather information for a classroom project. (ISTE 2 & 4)

- Follow Internet safety precautions

Grade 5

Students publish a research paper with appropriate software. (ISTE 1, 2, 3, 4, 5, & 6)

- Use proper keyboarding skills
- Import graphics from a variety of sources
- Utilize the electronic spell/grammar check and thesaurus
- Utilize strategies to search for information
- Cite sources
- Critique the validity of resources
- Practice ethical behavior associated with plagiarism

Students employ multimedia software to demonstrate research and display end results of a classroom unit of study. (ISTE 3 & 4)

- Utilize scanners and digital cameras to import images that graphically enhance presentation
- Identify and demonstrate effective presentation skills that enhance the project

Students carry out Internet research through a variety of web mediums that require the acquisition and synthesis of information as well as the evaluation of visited websites. (ISTE 5 & 6)

Grade 6

Students carry out Internet/computer research (web search and online encyclopedia) while evaluating reliability of online sources. (ISTE 5 & 6)

Students publish a creative writing piece with appropriate software. (ISTE 3 & 4)

- Use keyboarding and word processing skills to type and edit
- Utilize graphics from a variety of sources to illustrate (Clipart and Internet)

Students use multimedia sources (see current attached list) to research and present information on a classroom unit of study. (ISTE 4 & 5)

Students communicate via email or online bulletin boards with teacher approved sources outside of the school to gather information on a unit of study. (ISTE 2, 4, & 5)

Students in collaboration with teachers, utilize camcorders and simple video-editing equipment to produce a class movie that increases their video literacy and deepens their understanding of a curricular topic. (ISTE 3 & 4)

Grade 7

Students utilize personal network accounts for desktop management and archiving. (ISTE 1)

Students identify and use the appropriate software to create a data table, graph, and write a report based on information for a unit of study. (ISTE 3 & 6)

- Record data in data table (Spreadsheet)
- Graph to show relationship between data (Spreadsheet)
- Write a paragraph comparing the data as seen in the graph (Word processing)

Students distinguish between appropriate and inappropriate web materials and utilize appropriate materials. (ISTE 2)

Students utilize research practices to locate data on a given topic. Students determine validity of source and synthesize information in a research paper or project. (ISTE 2, 4, & 5)

Grade 8

Students utilize the resource account shared by students on the network to make information available for cooperative activities. (ISTE 1, 2, 3, 4, 5, & 6)

Students utilize spreadsheet programs to record and analyze data. (ISTE 3 & 6)

Students appropriately use and download information from websites. (ISTE 2)

Students use multimedia hardware and software for presentation of researched materials. (ISTE 3, 4, & 5)

- Use digital cameras and/or scanners to incorporate visual material in a presentation.
- Use PowerPoint presentations to present information from a unit of study
- Create a newsletter incorporating information from a unit of study

Grade 9-12

Students use general and content specific software/hardware to support learning (see current attached list). (ISTE 1, 3, 4, 5, & 6)

Students identify the legal and ethical issues surrounding research. (ISTE 2, 5, & 6)

- Utilize proper citation
- Identify consequences of plagiarism
- Practice legal and ethical behaviors regarding information technology
- Evaluate credibility of websites

Students employ technology in the development of strategies for solving problems in the real world. (ISTE 2, 5, & 6)

- Utilize technology for content specific activities
- Apply advance research skills including database searchers i.e., ERIC, Grolier Online, Pro-Quest Direct
- Evaluate credibility of websites

Students collaborate with peers, experts and others and use technology to compile, synthesize, provide, and disseminate information and other creative works. (ISTE 6)

- Create projects, class videos, and/or commercials for a unit of study
- Create student publications (newspaper, yearbook)
- Use distance learning to connect with outside sources

Available Hardware

	Elementary	Room:	Middle	Room:	High	Room:
Computer Lab	X	301	X	114	X	135
Personal Computers	X	All	X	All	X	All
Scanner	X	Lab	X	Lab	X	Lab
Digital Cameras	X	Lab	X	Office	X	Office
Local printers	X	All	X	All	X	All
Network printers	X	Lab	X	Lab	X	Lab
LCD Projectors	X	Lab	X	Tech	X	Tech
Business Lab	X		X	146	X	
Library (Limited Use)	X	X	X	206	X	206
Art (MAC's)			X	Art	X	Art
Distance Learning					X	144
Graphing Calculators			X	Math	X	Math
Tablets					X	Art
Smart Boards					X	105
Camcorder	X	Office	X	Office	X	Office

Available Software

	Elementary	Middle	High School
Microsoft Office 97	X		
Windows XP	X	X	X
Windows 98	X	X	
Microsoft Word 2003	X	X	X
Microsoft Excel 2003	X	X	X
Microsoft Power Point	X	X	X
Internet Explorer	X	X	X
Norton Antivirus	X	X	X
Real Player	X	X	X
Flash Player	X	X	X
Quick Time	X	X	X
Adobe Acrobat Reader	X	X	X
Harcourt Reading	X		
Type to Learn	X		
Inspiration	X	X	X
Mapmakers Toolkit	X	X	
Time-liner	X		
Ultimate Writing	X		
Numbers Undercover	X		
Memory Fun	X		
Tenth Planet Series	X		
PageMaker		X	X
CAD			X
Microsoft Publisher		X	X
Photoshop		X	X
Adobe Go-Live		X	X
iMovie			X
Adobe Illustrator		X	X
Voyager			X

Glossary

Hardware – Any of the physical equipment that connects to a computer (examples: monitor, keyboard, scanner, digital camera, etc.)

Hot List – Teacher generated list of web links

Multimedia – Any of a variety of electronic informational sources

Network Folder/Accounts – a folder created for adults and students that can only be accessed by the individual's password located on the school's network.

Online Bulletin Board – Password protected online discussion area

Software – An program on a computer (examples: Microsoft Word, Inspiration, FileMaker Pro)

Tablet – Input device that can be used for drawing or mouse functions

WebQuest – A specific tasked designed for students to manipulate through websites and activities

Web Search – A subject based search using any internet based engine (examples: Google, Yahoo, etc.)

Technology Curriculum Committee and Building Supports

Joe Scott – Technology Coordinator – x192
Shelly Johnson– Elementary Computer Lab – x302
Ken Welgoss – High School Art – x149
Colleen Nottage – High School Business – x139
Mike Thomas – Middle School ELA – x225
Erica Leach – Middle School Special Education – x219
Kristen Kneer – Third Grade Teacher – x302
Lisa Warner – Elementary AIS – x302
Pat Shaw – Business Manager – x106

E-Rate Requirements Verification Sheet

Requirement 1

An establishment of clear goals and realistic strategies for using telecommunications and information technology to improve education and/or library services.

Page(s):

3	4	5
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Requirement 2

A professional development strategy ensuring staff will know how to use information technology to improve education and/or library services.

Page(s):

7	8	9	10	11	12	13	14	15
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Requirement 3

Included assessment of telecommunications services, hardware, software, and other services that will be needed to improve education and/or library services.

Page(s):

15	16	17
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Requirement 4

District provided budget to acquire and **maintain** the hardware, software, professional development, and other services that will be needed to implement the technology plan strategy.

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Requirement 5

An evaluation process enabling the district to monitor progress towards specified goals and make mid-course corrections as needed.

Page(s):

12	13	14	15	16	19	20	21
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Proposed Building Renovation Plan improvements:

High School:

1. Network data infrastructure	\$30,000
2. Data closet improvements	\$50,000
3. Wireless Infrastructure	\$100,000
4. Voice system improvements	\$150,000
5. Access control	\$35,000
6. Video Surveillance	\$40,000
7. Cable TV system	\$150,000
8. Backup Generator	\$50,000
9. TV Studio	\$150,000

Elementary School:

1. Network data infrastructure	\$150,000
2. Data closet improvements	\$50,000
3. Wireless Infrastructure	\$50,000
4. Voice system improvements	\$40,000
5. Access control	\$20,000
6. Video Surveillance	\$40,000
7. Cable TV system	\$50,000
8. Backup Generator	\$50,000
9. Digital projectors	\$30,000