

MANCHESTER PUBLIC SCHOOLS
DISTRICT TECHNOLOGY PLAN V

2004 - 2007



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Dorothy and her acquaintances struggled along the yellow brick road toward Oz only to find a “wizard” who hid behind his technology. However, along the way, the group discovered that when they learned, they had the skills to solve their problems: confidence, caring, shared knowledge, and of course, the red shoes.

This fable holds an important message for Manchester Public Schools as we cross a threshold in a technology-driven, technology-supported, and technology-dependent century. Technology use, as an isolated student learning outcome, holds as little promise for our schools as Oz held for Dorothy and friends. However, integrated with curriculum that is rich with knowledge sets, skill theory, and social development, technology can enhance student learning results. Literacy for the 21st century includes technology skills.

A technology-supported instructional model integrates innovative concepts about teaching, learning, school culture, adult, student, parent, and community roles. Our students need learning to be set within a large conceptual and social context so that they can make connections, construct meaning, and apply their learning. Our democratic nation demands an educated citizenry that values diverse perspectives, so learning in such a context implies social interaction. Socialization within the classroom and connectivity beyond the classroom become important instructional goals, processes, and learning outcomes. Our virtual environment includes connectivity to key people and technology tools. “Systematic connectivity” allows us to extend time and overcome geographic barriers to provide an education that is truly “systemic” with the entire community learning and centered on the student. In a technological environment, traditional teachers are valued, as are

- parents, our first teachers, for their unique perspectives, first-order information, and primary guidance and support;
- business and industry partners for mentoring toward workplace competencies in a “21st Century Electronic Work Guild” experience;
- senior citizens for intergenerational contact and “more experienced” perspectives;
- peers across district, regional, state, and national boundaries for sharing and analyzing data, presenting ideas.

Technology, used appropriately and poised at the site of teaching and learning, is a powerful tool. With it, we can transform our educational environment to be one that is **both** student-centered and knowledge-centered. A knowledge-centered environment includes important bodies of knowledge which will be helpful to students as they move through a course of study sequences toward their graduation into a knowledge-based workforce. Because all knowledge and information available cannot possibly be reviewed, stored, and retrieved in the human brain, some of the critical components of a knowledge-centered environment are skill sets that will help students to access information and to create knowledge.

A technology-enriched environment can also assist educators in planning the needs of individual students and the needs of society. With the assistance of technology, we can create a model for intellectual curiosity and inquiry in which students learn to recognize problems and create alternative solutions that are situated in meaningful social context. Students become self-directed learners in setting purposes, forming critical opinions, reflective and responding in collaborative settings.

Through inquiry-based teaching and learning, students become work generators, organizing information not only to solve problems but also to formulate problems in order to prepare as productive citizens. In a project-based environment, where higher order thinking is expected, students must be fluent in basic skills such as interpreting, conclusion drawing, questioning, in order to actively process information, construct knowledge, and work with complex ideas.

The implications of this culturally and instructionally reformed classroom are great. This is a harbinger of role change for students, teachers, parents, and businesses. Professional development needs to be front-loaded and continuous. Equity of access of technology is important for all students, reflective of their individual needs.

In a technological and professional community, we are all learners as well as teachers. Students become workers and teachers in order to learn. Teachers become learners again, learning from each other, from students, from parents, and from business people. Throughout the Industrial Age, schools were seen as sites to sort and select students for college and “success” or for a workforce that demanded little more than a sixth grade education. However, in an era in which work productivity hinges upon workers’ and teams’ abilities to sort and evaluate vast amounts of information, the educators, who teach the future workforce, understand that knowledge and information growth is exponential. A teacher’s role is no longer to find which students will be successful and train them. Rather, it is one to assist all students to become contributing members to the global economy and to society.

This dramatic shift in the meaning of the icon “teacher” must be preceded and spurred by a shift in the nature of professional development. In this technological schoolhouse, teachers have a tolerance for ambiguity and open-endedness because an inquiry-based environment demands it. On-going professional development includes training in: technology literacy, technology support skills, and management of the technology-enriched classroom. Perhaps more importantly, the professional development program offers the advantage of technology environment as a way of teaching and learning. This effort requires a refocusing of professional development, expanding our growth as teachers through ongoing support with opportunities for reflection.

One promise of technology becomes a key challenge. Appropriate levels of technology can be the great equalizer in a society that seeks to service all toward productivity. Technology can accommodate and mitigate physically and cognitively-challenged students. It can improve the functioning capabilities of individuals with learning disabilities. When students of all socio-economic levels have equal access to technology, then all students have an equal opportunity to access knowledge, store, retrieve, and organization information; conduct original research and design; and present themselves...all workforce skills which our society demands.

In this document, Manchester Public Schools publishes its intent for technology integration through hardware, software, and human resources deployment; professional development; curriculum revision; and, connectivity to the large community.

COMMITTEE MEMBERSHIP

A special thanks for the following individuals for their ongoing commitment of time to this project. Their assistance was invaluable to the completion of this project and the production of this document.

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SECTION A

Philosophy

The fundamental mission of the Manchester Public Schools is to ensure that all students continually strive for academic excellence and are given the opportunity to develop intellectually, emotionally, socially, and physically in a safe and supportive environment that is conducive to learning. All students can become active, lifelong learners who demonstrate respect for self and others.

Students must build skills for success in the 21st century. These skills include a solid academic foundation, a global perspective, and technological literacy. A challenging and comprehensive curriculum encourages students to become critical, creative, and reflective thinkers. Our students are expected to become responsible, contributing participants in our democratic society and global communities.

Through instruction that integrates technology, the educational “community” will transform instruction and create a globally-connected environment that is dynamic, relevant, interactive, exploratory, creative, and exciting.

MAJOR BELIEFS ABOUT TEACHING AND LEARNING WITH TECHNOLOGY

- Appropriate technologies are critical educational tools for all aspects of learning, including planning, delivery, assessment, and presentation. Technology is essential in organization and management of student data and communication as well.
- It is our responsibility to prepare students for productivity, success, and personal fulfillment in this globally connected and technologically dependent world.
- It is imperative that students become skilled at using technology. Students and teachers stay current, cooperative, and competitive through technology's quick delivery of information, data production, global connectivity, simulations, extrapolations, and research capabilities.
- All students, regardless of ability, will benefit when technology use is embedded into instruction. All students must have equity of access to technology. Furthermore, through electronic mail, distance learning, and other technologies, all Manchester students can learn together. Students are members of a larger community within the school and beyond the school walls. Technology "connects" schools to this network, fostering an interactive, participative, and globally responsive citizenry.
- Technology-integrated instruction transforms instruction and overcomes constraints of time, space, and resources by:
 - ◆ motivating and stimulating new concept development
 - ◆ minimizing student disabilities and safety issues
 - ◆ individualizing the learning experience by servicing ability levels and learning styles
 - ◆ promoting collaboration, interaction, and communication
 - ◆ facilitating information referencing, data organization, and idea exchange, and product creation for problem solving
 - ◆ providing current information to allow students to tackle real world issues and solve relevant problems
- Teachers use technology to help students construct new meaning and build on prior knowledge. Technology provides a vehicle for teachers to become facilitators, guides and learners.
- Through technology, students explore, experience, experiment, create and present. Students can adopt new roles in the classroom and connect to careers. Technology motivates and enhances the student role as worker, thinker, producer, designer, and problem-solver.

MAJOR BELIEFS ABOUT TEACHING AND LEARNING WITH TECHNOLOGY

- The assessment of student research/work should be seamless, informative, and a learning experience for all. Technology facilitates student assessment through demonstration/presentation, allowing students to assemble their work and participate in self-analysis and goal setting.
- Technology houses student information databases which inform instructional decisions, program development, budget expenditures, and Board of Education policy. Technology databases allow educators to make informed instructional, programmatic, and student support decisions based upon the patterns that emerge from student performance data.
- All educators (classroom teachers, technology staff, library media personnel, and administrators) share responsibility to learn to use technology proficiently and must model technology appropriately to accomplish work tasks.
- The district has the responsibility to support the ethical use of technology.
- The district has the responsibility to provide and create training opportunities for teachers and administrators.
- Time for teacher learning and technical resource support are imperative to ensure continuous innovation of instruction which integrates technology.
- Students benefit most when technology is available at the point of instruction and assessment.
- Adequate infrastructure, equipment in classrooms, software, automation, and support/maintenance personnel are imperative to support technology use.
- Access to technology after regular school hours is critical. This access is critical for school/home/community interaction and communication task accomplishment.

SECTION B

Goals, Articulation and Timeline

CURRICULUM AND INSTRUCTION

- To utilize technology to improve students' ability to process information, acquire knowledge, and be motivated to learn.

PROFESSIONAL DEVELOPMENT

- To promote technology integration at the site of teaching and learning through ongoing professional development.

INFRASTRUCTURE

- To maintain a core technical infrastructure to support the integration of technology at each school.

ACCESS

- To ensure equitable access to technology K-12, supported by sufficient technical services.

EFFICIENCY

- To promote efficiency in school operations for all personnel and their areas of responsibility.

COMMUNITY COLLABORATION

- To use technology to facilitate internal and external collaborations.

EVALUATION

- To evaluate the plan through benchmarks and to monitor, adjust and report on the implementation.

Goal: To improve student ability to process information, acquire knowledge, and be motivated to learn.

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Implement learning standards for effective lessons using technology	2004 - 2005	Administration Media Specialists	Curriculum Documents, State Standards for Information Technology		
Revise and implement K-12 scope and sequence for student technology competencies	2004 - 2005	K-12 Curriculum Committees, Administration	Manchester Public Schools Technology Scope & Sequence		
Correlate each curriculum with the technology component of the State frameworks	Ongoing	K-12 Curriculum Committees, Administration	Math, Science, Language Arts, Social Studies curriculum documents		
Establish uniformity in information access, referencing and problem-solving strategies for all curricular areas to use	2004 - 2007 (Curriculum Revision Cycle)	Technology Committees, Library Media Specialists, K-12 Curriculum Committees	Big 6 Skills, Correlation between state frameworks of Information Technology, Curriculum documents		
Implement a cycle of technology integration into the curriculum: revise curriculum, review information technology standards, train teachers, develop and implement lessons utilizing instructional media	Ongoing	K-12 Curriculum Committees, Professional Development Committee	Reviewed software and written lessons using technology, Professional development plans, Curriculum documents, District professional development roster; student work		

CURRICULUM AND INSTRUCTION

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Evaluate and make recommendations for revision of technology components of the curriculum in all curricular areas	Ongoing (Curriculum Revision Cycle)	K-12 Curriculum Committees, K-12 Technology Supervisor	Revised technology component of curriculum, annual survey results		
Teachers publish, share, access and utilize technology-rich model lessons	Ongoing	K-12 Curriculum Committees, Grade Level Teachers	Lesson plans on the Intranet, Portal, etc.		
Adopt guidelines for reviewing and selecting instructional media	2004	Central Office Administration	Guidelines for Teachers and Students		
Provide ongoing inservice for teachers and administrators on integration of technology into classroom lessons	Ongoing	Administration	Tech Times, Annual menu of district-sponsored technology workshops, Professional Growth Plans		
Promote the appropriate use of technology in each building	Ongoing	Principals, Library Media Specialists, Building Technology Committee, Teachers	Professional Growth Plans, Teacher Evaluation Instrument, School Improvement Plans		

CURRICULUM AND INSTRUCTION

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Create educator's online web page for curriculum (password protected)	2005 - 2006	Central Office Administration	Web page		
Coordinate and track student use of technology	Ongoing	Central Office Administration, All Instructional Staff, Principals	List of grade-specific curriculum projects/maps, Curriculum documents, Strategic School Profile, teacher schedules, computer lab schedules		
Identify grade-level performance tasks that demonstrate student technology skills and competencies	2006 - 2007	Curriculum Committees, Curriculum Office	Curriculum document		
Increase student and facility use of CT Digital Library (iConn), and online library and resource catalog	2004 - 2005	Media Specialists, Library Media Dept. Head	Professional Development workshops, usage log		

PROFESSIONAL DEVELOPMENT

Goal: To promote technology integration at the site of teaching and learning through ongoing professional development.

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Train administrators	Ongoing	Administrative Professional Development Committee, Central Office Administration and Technology Supervisor	Training roster, School Improvement Plan, CEU record		
Survey staff needs	Biennial	Assistant Superintendent, Technology Committees, K-12 Technology Supervisor	Survey results		
Survey Departmental Needs	Ongoing	Assistant Superintendent, K-12 Curriculum Committee, K-12 Technology Supervisor, K-12 Media Dept. Head	Curriculum documents, Survey results, Professional Growth Plans		

PROFESSIONAL DEVELOPMENT

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Offer professional development through inter-district consortia, online learning, etc.	Ongoing	Consortia Superintendents, Consortia technology coordinators	Activity rosters, Technology-rich units		
Investigate technology CEU waiver.	2006 - 2007	Curriculum Office, K-12 Supervisor, Human Resources	Policy and waiver		
Increase awareness of assistive technology by offering assistive technology workshops	Ongoing	K-12 Supervisor Special Ed Supervisor Ed Tech Coordinator	Training roster		

INFRASTRUCTURE

Goal: To continue to build a core technical infrastructure to support the integration of technology at each school.

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Establish infrastructure standard for growth	Ongoing	Central Office Administration, Information Systems Department	Embedded facilities that enable remote management in hardware should be specified in purchases where applicable		
Implement equipment standards for technology in the schools, i.e. number of computers in the classroom and media center, wiring	Ongoing	Central Office Administration, Curriculum Council, Site-Based Technology Committees	Building Plans Town Bid List Minimum standards for donated equipment		
Implement technology access standard	Ongoing	Central Office Administration, Information Systems	PCs purchased with <ul style="list-style-type: none"> • Network Interface Cards • Remote management facilities • Remote access • Video conferencing capability • Wake on LAN 		

INFRASTRUCTURE

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Wire classrooms and professional resource area for voice, video, and data	Ongoing	Central Office Administration	Inventory of wired facilities		
Provide network capacity to each classroom for video	2004 - 2007	Central Office Administration, Information Systems	Inventory of wired facilities		
Provide users with network storage capacity	Ongoing	Central Office Administration, Information Systems	Increased hard drive capacity		
Survey and evaluate current electrical needs and design a workable system	Ongoing	Facilities Specialists, Facilities Study Committee, Central Office Administration	Adequate electrical services		
Install wireless access within school building range.	2007	Town of Manchester Information Systems	Wireless antenna at every school.		
Video conferencing Web Cam's In Libraries for remote "customer service"	2004 - 2007	Town of Manchester Information Systems Library Staff Central Office	Use of walk up on IM with web cam supported pc in each library		

INFRASTRUCTURE

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Add security technology to control/detect “plug-in” network intrusions into Cat-5 ports	2004 - 2005	Town of Manchester Information Systems Central Office Principals	Test “management” of MAC address connections		
Standardize a “recycled”/donated pc web browser capability	2004	Town of Manchester Information Systems	<ul style="list-style-type: none"> • Test Linux usability • Deployed used, donated pc’s • Locations needing more “internet/ browsers” get them 		

Goal: To ensure equitable access and support of technology (K-12).

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
All new computers on the infrastructure meet access standards	Ongoing	Central Office Administration, Information Systems	<ul style="list-style-type: none"> • Wake on LAN on NIC • Remote management facilities • Full conference Capability 		
Purchase computers for K-12 classrooms	Ongoing	Central Office Administration, Principals, Department Heads, 9-12 Technology Coordinator	Deployment inventory		
MHS World Language completion	Pending MHS Renovation Plan	Facility Study Committee	Facility Use		
Provide technical support for 1500+ computers (K-8) using remote support technologies	2007	Central Office Administration, Principals, Information Systems	Full Time Equivalent Configuration (2.5 Technicians) <ul style="list-style-type: none"> • Technology in place for remote support. • Minimal down time 		

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Evaluate current work order system	2005	K-12 Media Dept. Head, Technology Supervisor, BOE Information Systems	System online and in use		
Ensure disabled student access, purchase/use special purpose equipment district-wide	Ongoing	Special Education Staff, Central Office Administration, Principals, Technology Committees	Deployment Inventory		
Investigate "508" compliance	Ongoing	Technology coordinator, Information systems	"508-compliant" websites		
Investigate reassignment of replaced equipment	Ongoing	Central Office Administration, Technology Planning Committee	Redeployment plan and bids procedures		
Implement Acquisition/Lease/ Purchase plan	2005 - 2007	Central Office Administration, Technology Planning Committee	Needs/Priorities list, Deployment inventory		
Expand Library Media Specialists FTE to 1.0 at each elementary school	2005 - 2007	Superintendent, Assistant Superintendent	FTE Configuration		

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Integrate non-computer-based technologies as appropriate	Ongoing	CO Administration, Principals, Information Systems	IP telephones, electronic whiteboards, IP digital cameras, PDAs, etc.		
Presentation station in every classroom using town-wide streaming (video capability).	2007	Information Systems	Video conferencing, streaming video, Channel 16 project		
Deploy donated "internet" pc's with Linux solutions	2004 - 2005	Central Office Administration Principals Department Heads 9-12 Technology Supervisor	Deployed inventory into schools		
Wireless Main Street Project	2004 - 2005	Town of Manchester Information System Downtown Business District	Students access internet at locations from Mary Cheney Library to Bennet through wireless technology		

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Establish Manchester Community College Network to Network Access	2004 - 2005	Mary Cheney Library Town of Manchester Information System School Libraries Principals Teachers College-bound students	<ul style="list-style-type: none"> • Students can get access to MCC multimedia resources • Teachers can get access to MCC e-materials • Potential MCC students have access to college 		
Start planning (pending DPUC decision) wireless coverage from all municipal buildings, fire substations and schools.	2005	Mary Cheney Library Town of Manchester Information System School Libraries MCC Libraries MCC College	Access to MCC Multi-Media Library content online.		
Establish and utilize connection to the Connecticut Education Network	2005	CT State Department of Education, Town and BOE Information Systems	Classroom access to online resources through CEN		

Goal: To promote efficiency in school operations for all personnel and their areas of responsibility

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Continue to update software and hardware for financial and personnel management	Ongoing	Board of Education, Central Office Administration, Information Systems	Installation of system <ul style="list-style-type: none"> • Migrate old software to new hardware • Implement web-based (Munis) financial system to replace old system 		
Continue to update software and hardware for student record management and reporting	Ongoing	Secondary Principals, Guidance, Data Processing Team, Scheduling Personnel	Installation of system, Student management system and electronic report cards		
Use drill-down capacity to find correlation among data sets to enhance instruction and improve service for earlier intervention	Ongoing	Central Office Administration, Principals, Information Systems	<ul style="list-style-type: none"> • Edsmart software training and use • Charted and graphed correlational data • Test scores • Financial operations (cost for services), Teacher Forum Attendance, etc. 		
Use data systems to generate local, state, and federal reports	Ongoing	Central Office Administration, Information Systems	In-house digitally generated reports		

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Implement and use student management software to report student achievement.	2005 - 2006	Central Office Administration, Principals, Teachers, BOE Information System	Electronic report cards, student achievement reports		
Automated systems to help manage physical buildings, heat, security, etc.	2007	Central Office Administration, Buildings and Grounds, Information Systems	Automated system, Use Net-based standards to deploy security, Additional schools on system		
Expand existing work order system for buildings and grounds	2001-2004	Buildings and Grounds. Information Systems	Districtwide access		
Automate attendance process at Districtwide	2006	Central Office Administration, Assistant Principals, Technology Supervisor, Information Systems	<ul style="list-style-type: none"> • Online functional system • Automate census and reporting – Teacher Exception Reporting Automation 		
Establish districtwide connection between teachers and parents – voicemail, IP telephony, email	2006	MHS Data-processing	<ul style="list-style-type: none"> • Parent link • Schoolnotes on portal • Implement extended functions beyond voicemail • Web-base access 		

COMMUNITY COLLABORATION

Goal: To use technology to facilitate internal and external collaborations.

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Develop partnerships between businesses and schools	Ongoing	Central Office Administration, Principals, Information System	School-to-Business partnerships, Main Street Wi-Fi Project (2004)		
Continue intra-district/university technology collaborations	Ongoing	Central Office Administration, Principals, Teachers, University Staff	Shared lessons, collaborative projects, grants		
Expand partnerships among schools and town departments	Ongoing	Information Systems, Library Media Specialists, Board of Education, Board of Directors	Collaborative projects GIS map project		
Increased use of Town Geographic Information System (GIS) at high school	Ongoing	9-12 Technology Coordinator, Department Heads	Student projects		
Expand partnerships between parents and schools	Ongoing	All staff and parents	Survey template, increased school and parent communication through technology		

COMMUNITY COLLABORATION

ACTIVITY	TIMELINE	PERSON(S) RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Increase student and faculty use of CT Digital Library and databases licensed by public library (iConn)	Ongoing	Media specialists, Public librarians	Student projects, lesson plans		
School Readiness web linkages	Ongoing	Collaboration among Literacy coordinators, public library and Human Services department	Informational brochure, meeting agenda		
Establish and maintain district, school and teacher websites	2005	Central Office, Building administrators, Teacher	Lutz Museum Guidelines for websites		
Promote the use of lab-based library catalogs by students, staff, parents, community members.	Ongoing	Media Specialists Town Library	Log of usage		

Goal: To evaluate the plan through benchmarks, and to monitor, adjust, and report the implementation.

ACTIVITY	TIMELINE	PERSON RESPONSIBLE	EVIDENCE	PROGRESS	
				Complete	Ongoing
Monitor performance measures and results relative to benchmarks	Ongoing	District personnel; Community	Municipal website		
Produce and publish report	Annual	K-12 Technology Supervisor, Technology Committees; Information Systems	Electronic report		

SECTION C

Resources

A number of human resources will be necessary to achieve the District Technology Goals. Human resource needs will require talented individuals with technical and professional skills.

➤ **K-12 Technical Support**

Technical support for computers and infrastructure is essential for the operation of technology and needs to be established at all school levels.

- In grades K-8, this resource is provided via onsite support and the continual automation of Tech-Support to sustain and keep improving the ratio of computers to tech support personnel. Currently, there are three (3) tech support personnel servicing 1200 computers, a ratio 400 to 1. The number of computers is expected to increase to 1500 with a ratio of 500 to 1.
- An on-site Computer Support Technician is in place for the implementation of technology in grades 9-12. This individual supports 750+ computers in addition to building servers and networks.

➤ **Network Administration Management**

Network management will be a highly automated requirement met by a small highly-skilled group using technology to manage technology. The district's need to expand its network capability in order to support curriculum improvement parallels its strategy to increase the efficiency of the people providing technical support by using that same network to provide that technical support through network management facilities and utilities.

➤ **Training Support**

To optimize the district's investment in technology, it will be essential to provide ongoing training for teachers and support staff across the district.

- **Library Media Specialist**

A full-time Library Media Specialist would address the requirement for Information Specialist, Teacher, and Instructional Consultant supporting the goal of proficient level for word processing, information retrieval, presentation/multimedia technology, database management, Internet usage and e-mail technology. Manchester does not, at this time, meet this staffing goal.

- **K - 12 Media Department Head**

The Media Department Head will oversee implementation of technology in the district's library media centers and support the efforts of the media specialists.

- **K-12 Technology Supervisor**

This supervisor must be highly skilled in best practices in instruction and assessment as well as possess advanced technology skills. This supervisor will work along with the Assistant Superintendent for Instruction to integrate technology into instruction that: establishes and implements a rigorous academic content for all students; responds to the needs of students, uses themes and concepts to integrate across disciplines; includes strategies and materials to solve problems in real-life situations which can be digitally communicated. The supervisor will be responsible for overseeing technology-related professional development and for coordinating technology efforts in the district.

Electrical Requirements

Most classrooms and other specialized workspaces will require additional electrical service. Upgrades will be provided as needed, according to code and adequacy requirements.

Rooms and Furniture

Staff members need to look beyond traditional desks and seating in the classroom. Classrooms of the 21st century require a classroom design that will support a technology-rich curriculum.

- Classroom furniture needs to be flexible and ergonomically correct for:
 - student movement within the room
 - task differentiation
 - cooperative learning
 - inquiry-based learning

(See Appendix for one possible classroom design.)

SECTION D

Facility Design & System Configuration

Within the past year, we have begun to move to a classroom-based technology environment. Technology is appearing at the site of teaching and learning in grades K-12. Over 50% of classrooms have up-to-date printers and computers. We anticipate that over the life of this technology plan, we will complete the classroom-based technology environment. This will allow us to transition to a student-based technology environment.

Distance Learning

Manchester High School and Manchester Community College have a long history of partnership and cooperative programming. MHS is connected to MCC campus through the COX Cable Network which also connects the high school with the communities of South Windsor, Glastonbury, Wethersfield, and Newington. Using distance learning techniques, the five community high schools share programming with the college in advanced languages, art history, allied health, and other curricular areas. This area is expanding at a rapid rate because of the cost effectiveness associated with sharing of costs across other school districts. Advanced Foreign Language courses, for example, that would be difficult to offer because enrollment would not be sufficient, are now possible because enrollment can now be shared with other districts. The MHS closed circuit tv network, proposed as part of this project, will assist in the distribution of this resource to classrooms around the building. Planning for IP-based distance learning is in progress. A deployment schedule is awaiting decisions concerning future utilization of the existing MHS building. Some of the MHS programs are:

- Channel 16: This class is designed to give students the opportunity to work with town officials and put together video productions that will air on the town's municipal access television channel.
- Television Production: This class puts together a television news program containing new reports on program containing news reports on Manchester High School that airs once or twice a month. It is played back throughout the high school on a closed-circuit television network and on the town's municipal access channel.
- Red Productions: This club has been put together for students who like to get involved with television studio work to record three camera productions of events that pertain to Manchester High School. These programs consist of football games, performing arts productions and entertainment programs.
- Morning Announcements: Each morning a select number of students come down to the television studio and put out a live television broadcast throughout the school delivering announcements to the school on updated events and programs.

Washington Media Magnet School has a Tandberg 6000 videoconferencing system that is utilized by all classes for distance learning and by the district for professional development.

CPTV Antenna

The CPTV Knowledge Network is a four-channel Instructional Television Fixed Service (ITFS) System. Broadcast signals are relayed from a control center to ITFS transmitters located strategically throughout the state. There are transmitters currently located in Glastonbury and Farmington. To receive the signals, a special receiving antenna must be mounted and a converter box connected to the antenna to allow the ITFS frequencies to be viewed on a standard television set or recorded on videotape.

The Knowledge Network is a flexible distance learning system which can support any number of district programs and serve diverse audiences. It can broadcast around the clock, seven days a week, with up to four different programs aired simultaneously. Programming can be pre-taped and non-interactive. Programming can also be entirely live and interactive (one-way video/two-way audio/fax and Internet) or it can be a combination.

The Knowledge Network provides approximately 20 hours of instructional television programming each week to kindergarten through high school. In addition, it can provide professional development workshops, in-service or on-the-job training, video conferences and college courses without the need for participants to leave Manchester. Besides student and school personnel, the network can potentially also serve day care organizations, the Manchester Early Childhood Readiness Council, school-based Advisory Councils, health care professionals (including nursing homes), the public libraries, adult education, and the public at large (both town and community groups). There are currently two antennas in Manchester, one located at Manchester High School and another at Manchester Memorial Hospital.

COLLABORATION IN THE CLASSROOM AND OVER THE INTERNET

Communication skills are an essential part of learning; the Internet offers one of the most motivating and effective ways of teaching students to communicate. The Internet also provides the opportunity for our students to collaborate with other students around the world. Collaborative learning becomes more authentic when students are able to work together from a variety of cultures.

The creation of “telecommunities” can teach students to work cooperatively. Online sites such as National Geographic, NASA, Global Schoolhouse, GlobaLearn, Marco Polo, and the Edgate portal allow our children to reach beyond classroom walls into statewide, national, and global education learning circles at all grade levels.

USING TECHNOLOGY FOR SUSTAINED PROFESSIONAL DEVELOPMENT AND SUPPORT

The Internet provides educators with an expanded professional community. Online, they can meet teachers and experts in their field and find collaborators for student online projects and curriculum development. Educational websites, news groups, and other collaborative spaces offer a forum for these interactions, making the exchange of ideas an ongoing opportunity not readily available before the Internet.

Educators across the nation can communicate on a regular basis about issues that affect their teaching, students' learning and the way schools cooperate. Collaborative online environments provide a place for our educational community to reflect on current practices and ideas that are necessary to manage the information explosion of the "Information Age".

An example of a collaborative network, the Manchester High School building network, utilizes current technology to facilitate development of performance assessment units, posting completed units on the network (LAN) shared by staff. In addition, the MHS network is used as a professional development facilitation tool to monitor individual professional growth plans and observations.

➤ **Current Connectivity**

Fiber Connections

Schools connected by fiber (Manchester High School, Bennet, Illing, Nathan Hale, Robertson) communicate at speeds up to one gigabit per second. Future connectivity will support transmission of digital video, internet protocol (IP) voice, and data. Fiber connections will support an unlimited number of users. Wireless is in place on first floor (25% on second floor).

Internet

The townwide communications network "MANCH-NET" connects to the Internet using multiple T-1 connections. Additional capacity for Internet traffic can be added easily with additional T-1 connections. MANCH-NET has also been designed to support T-3, ATM (asynchronous transfer mode) and SONET (synchronous optical network) connections should future demand require it.

➤ **Connecticut Education Network (CEN)**

The CEN is the nation's first all-optical K-20 network and is being developed by the Department of Information Technology (DOIT). The CEN connection provides free service to K-12 schools and libraries, allowing increased capacity through a high bandwidth connection. Manchester classrooms will have access to more internet-based educational resources beginning in 2005. (*CEN Connections: Spring 2004, CSDE*)

➤ **Future Connectivity**

The idea is based on a pilot project that was conducted at Illing Middle School. In order to provide fiber connectivity to other schools, the model concept will involve collaboration (Goal 6) with the Town and Board to provide early deployment opportunities.

The scope of this three-year plan is to put in place an infrastructure sufficient to support a progression of: minimum of 4 computers in each classroom, upgraded computer labs, and the capacity to allow remote communication connectivity from students, teachers, and the community outside the schools (Goals 1, 2, 3).

The two types of management systems supported in this plan are:

1. The traditional business and school management systems such as accounting, student records and grading.
2. The systems required to manage the technology itself such as network performance management, operating system software for servers, routers, switches, etc. Also, PC configuration and diagnostic management systems and management systems software for functions previously outside data networks such as unPBX's, video delivery, sensor/environmental controls, etc.

Fundamental efficiencies in school operations are addressed by constant improvement in number one above. The technical support productivity derived from the "automation" aspects of number two above will keep the human resource support costs growth from inhibiting the growth and deployment of curriculum technology. However, given the increased use of technology resources the demand for support services has out-stripped the ability of the staff to meet the needs.

Student Management

- Automated Attendance
- Scheduling Resources (people, time and places)
- Grading
- Report Cards
- Health Records
- Student Discipline
- Data Warehouse and Reporting (EDsmart)

Classroom Management

- Student Programs/Services
- Standardized Testing
- State and Local Assessments
- Teacher Anecdotal Information
- Student Project/Product/Portfolio Commentary

SECTION E

Interfacing Profiles

Public Libraries and the Library Board

An expanded partnership between the public libraries and school libraries is now possible utilizing the townwide data communications infrastructure.

This plan recommends that the partnership established to further explore these possibilities continue to do so.

Television Partnerships

Cox Cable has a long history of partnership with the Manchester Public Schools. Cox Cable provides an important resource for:

- Production
- Instructional Programming and Distance Learning
- Program Distribution
- Satellite Feed

CPTV

Point-to-point transmission of knowledge network from CPTV to Manchester schools equipped with antennae. The service provides professional development for our participating schools and preschools.

Pre-K – University Connections

Through building a professional community the Manchester Public Schools have embarked on a pre-K through higher ed continuous learning experience to support our K-12 curriculum continuum. We have connected with pre-K service providers and institutions of higher learning. Through joint professional development, grant writing, and Internet connectivity, the school system is fostering a collaboration which bring expanded resources, ideas, and communication to teachers and students in pre-K through 12 and beyond.

Technology should be an integral tool to foster communications between parents and the school. This communication should be two-way, and accessible through the Internet, automated telephone systems and school management systems.

Information on student performance, attendance, scheduling, discipline concerns, messages from students and parents and announcements from school offices should be available through these systems on a password protected basis.

In a system such as this:

- Online, real-time grades allow teachers to keep parents constantly updated on student performance and necessary makeup work.
- Attendance tracking online saves money at the high school by having an automated system call home for unexcused absences instead of a staff person. The system also aids parents in tracking potential loss of credit due to absences and allows parents to report excused absences from home.
- Online scheduling information from the Guidance Department aids parents, students, and teachers in making the most appropriate course choices for students.
- Discipline issues are relayed to parents, administrators, case workers, counselors, and teachers, with less delay. Timely notification maximizes the effectiveness of the disciplinary action taken.
- Parent/Teacher conferences may be scheduled.
- Parent/Teacher conferences may be done remotely through video/audio conferencing.
- Students and parents may leave messages for teachers and administrators at any time.

- Activities are publicized to foster parent and student involvement.
- Parents are informed of important upcoming dates and deadlines (SAT, college applications, etc.).
- Student progress is enhanced through parent/teacher cooperation via the Internet.
- Online student registration.

Each semester, an average of 200 area adult learners avail themselves of a variety of hands-on computer-based courses on both the Windows 98 operating system and compatible application software, which include the Microsoft Office group of Word, Excel, Access, and PowerPoint. According to learner response, many of these courses are used to fulfill work-related requirements for job advancement or retention. In addition, there are job-related training classes integrating technology. All Adult Basic Education classes integrate technology.

Other courses, such as Home Computing, provide a working knowledge of basic computer concepts. Once this information is obtained, intelligent computer system purchase and/or hardware upgrade choices can be made. Currently, Internet-related courses are offered both at an introductory level and on Web Page Design.

The Manchester Board of Education, in partnership with the Vernon Regional Adult and Continuing Education Program, provides technology instruction to the citizens of Manchester through the Adult Evening School Program using the technology infrastructure at Manchester High School, the Vernon Adult Education Computer Lab at Bentley School and the Vernon Adult Education Computer Lab at Bentley School and the Vernon Adult Education Center One Stop at 893 Main Street in Manchester.

MANCHESTER PUBLIC SCHOOLS
DISTRICT TECHNOLOGY PLAN V - APPENDIX

2004 - 2007



Version 5.0
Adopted September 27, 2004

Technology Foundation Standards for All Students

The International Society for Technology in Education (ISTE) in partnership with a number of organizations and educators across the country, has developed National Educational Technology Standards (NETS) for students.

Six Categories of Student Standards are:

1. Basic operations and concepts
 - Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.
2. Social, ethical, and human issues
 - Students understand the ethical, cultural, and societal issues related to technology.
 - Students practice responsible use of technology systems, information, and software.
 - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
3. Technology productivity tools
 - Students use technology tools to enhance learning, increase productivity, and promote creativity.
 - Students use productivity tools to collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works.
4. Technology Communications tools
 - Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
5. Technology research tools
 - Students use technology to locate, evaluate, and collect information from a variety of sources.
 - Students use technology tools to process data and report results.
 - Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.
6. Technology problem-solving and decision-making tools
 - Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

Connecticut Technology Competencies for Educators

Below are abbreviated versions of the state technology competencies for educators. The complete versions of student, teacher and administrator competencies are located at <http://www.state.ct.us/sde/dtl/technology/admincorner.htm>.

Categories for Teacher Technology Competencies - 2000

- I. Educational Technology Concepts and Operations
- II. Creating Learning Environments and Experiences
- III. Productivity and Professional Practice
- IV. Social, Legal, Ethical and Human Issues

Connecticut Administrator Technology Standards – 2002

- I. Leadership and Vision: Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.
- II. Learning and Teaching: Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.
- III. Productivity and Professional Practice: Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.
- IV. Support, Management, and Operations: Educational leaders ensure the integration of technology to support productive systems for learning and administration.
- V. Assessment and Evaluation: Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.
- VI. Social, Legal and Ethical Issues: Educational leaders understand the social, legal and ethical issues related to technology and model responsible decision-making related to these issues.

PERSONNEL - CERTIFIED - NON-CERTIFIED

Rights, Responsibilities and Duties

Technology and Computer Network Use

The Board of Education provides computers, networks and Internet access to support the educational mission of the schools and to enhance the curriculum and learning opportunities for students and school staff.

Employees are to utilize the Manchester Public School System's computers, networks and Internet services for school related purposes and performance of job duties. Incidental personal use of school computers is permitted as long as such use does not interfere with the employee's job duties and performance, with system operations or other system users. "Incidental personal use" is defined as use by an individual employee for occasional personal communications. Employees are reminded that such personal use must comply with this policy and all other applicable policies, procedures and administrative guidelines.

Any employee who violates this policy and/or any administrative guidelines governing use of the school system computers will be subject to disciplinary action, up to and including discharge. Illegal uses of the school system computers will also result in referral to law enforcement authorities.

The telephones, computers and other electronics and communications systems of the Manchester Public Schools are the property of the Manchester Public Schools and are available to employees to properly facilitate the conduct of daily activities. The school system reserves the right to monitor all computer and Internet activity by employees. Employees have no expectation of privacy in their use of school system computers. Employees shall be advised that representatives of the Manchester Public Schools may review e-mails, faxes, modem and LAN/WAN communications, including Internet use, and voice-mail messages sent or received by employees. In addition, Manchester Public Schools may review records generated by the building security systems to monitor employee access to work areas.

Each employee, authorized to access the school system computers, networks and Internet services, is required to sign an acknowledgment form stating that he/she is bound by this policy and any administrative guidelines which may be developed or amended from time to time. The acknowledgment form will be kept on file.

Legal References: Connecticut General Statutes, Section 31-48d
 An Act Requiring Notice to Employees of Electronic Monitoring by Employers
 Connecticut General Statutes, Section 1-200 et seq
 The Freedom of Information Act
 Connecticut General Statutes, Section 53a-182b
 Harassment in the first degree

Adopted: June 24, 2002

PERSONNEL - CERTIFIED - NON-CERTIFIED**Rights, Responsibilities and Duties****Technology and Computer Network Use****Administrative Guidelines****MANCHESTER PUBLIC SCHOOLS****TECHNOLOGY AND COMPUTER NETWORK USE AGREEMENT**

I understand and agree that the use of technology and the Internet is a privilege.

I have read and fully understand the Manchester Public Schools Technology and Computer Network Use Policy #4118.5 for employee access to the computer network, Internet and e mail. I will abide by the Policy in full and understand that any violation of the Policy and Administrative Guidelines above is unethical and may create potential civil or criminal liability for me. I have been notified by the Board of Education of the Manchester Public School System of the potential use of electronic monitoring of employees' activities or communications. Should I commit any violation of the Policy, I recognize and accept that the Manchester Public Schools may commence legal and/or disciplinary action against me, which may result in revocation of my access privileges and my discharge from employment.

I understand that I am bound by this Policy #4118.5 and any administrative guidelines which may be developed or amended from time to time.

Name (please print) _____

Signature _____ Date _____

School _____

Job Title _____

PERSONNEL - CERTIFIED - NON-CERTIFIED**Rights, Responsibilities and Duties****Technology and Computer Network Use****Administrative Guidelines****MANCHESTER PUBLIC SCHOOLS****NOTICE**

Pursuant to the authority of Connecticut General Statutes, Section 31-48d, the Manchester Board of Education hereby gives notice to all its employees of the potential use of electronic monitoring in its workplace. While the Board of Education may not actually engage in the use of electronic monitoring, it reserves the right to do so when determined by the Board in its discretion.

"Electronic monitoring," as defined by CGS Section 31-48d, means the collection of information on school district property concerning employees' activities or communications, by any means other than direct observation of the employees. Electronic monitoring includes the use of a computer, telephone, wire, radio, camera, electromagnetic, photo-electronic or photo optical systems. The law does not cover the collection of information (A) for security purposes in any common areas of school premises which are open the public, or (B) which is prohibited under other state or federal law.

The telephones, computers and other electronic and communications systems of the Manchester Public Schools are the property of the Manchester Public Schools and are available to employees to properly facilitate the conduct of daily activities. Please be advised that representatives of the Manchester Public Schools may review e mails, faxes, modem and LAN WAN communications, including Internet use, and voice mail messages sent or received by employees. In addition the Manchester Public Schools may review records generated by building security systems to monitor employee access to work areas.

The law also provides that the Board of Education may use electronic monitoring without any prior notice when (a) the Board has reasonable grounds to believe employees are engaged in conduct that (i) violates the law, (ii) violates the legal rights of the Board or of other employees, or (iii) creates a hostile work environment and (b) such electronic monitoring may produce evidence of such conduct.

Questions about electronic monitoring in the workplace should be directed to the Director of Human Resources, Manchester Public Schools.

Instruction

Acceptable Use of Technology

The Board endorses student use of technology and the Internet for learning and research which enhances information available through other mediums. This includes participation in distance learning activities, asking questions of and consulting experts, communicating with other students and individuals, and locating material to meet the educational needs of the students of the Manchester Public Schools. The Internet, a global electronic information infrastructure, is a network of networks used by educators, businesses, the government, and numerous organizations. The Board of Education believes that the Internet is a valuable tool that should be used in schools to educate and inform students, much like books, magazines, video, CD-ROM and other informational sources.

While the Internet can provide students with a vast array of educational and informational resources, it can also be a window through which students could access information which is neither pertinent to nor appropriate for an educational setting. The availability of such electronic information does not imply endorsement by the Board of Education of its content nor of the use of such information by students and staff. It is important to give students assistance and guidance in accessing information which is beneficial to their education and equally important to recognize that total monitoring of students' access to the Internet would be impossible. Therefore, individual users of the Manchester Public School Network are responsible for their use of the network and are expected to use it responsibly.

To ensure appropriate usage of technology, the administration will establish guidelines for student exploration and use of electronic information resources. Such guidelines shall address issues of privacy, ethical use of information with respect to intellectual property, illegal uses of the network, and conditions of usage. The guidelines shall strive to preserve students' rights to examine and use information to meet the educational goals and objectives of the district. In addition, the district shall take steps, such as using filtering programs to block access to objectionable material, using access controls and supervision by staff to monitor and/or restrict access to the electronic informational resources.

Legal Reference: Connecticut General Statutes, Section 53a-182b
Harassment in the first degree: Class D felony

Adopted: August 26, 1996 (as Policy 5145.3)
Revised: June 24, 2002 (as Policy 6141.321)

Instruction

Administrative Guidelines

In recognition of the potential for improper use of the Internet in the educational setting, the Manchester Board of Education requires that students who use the Internet comply with the following policies, and any other usage guidelines promulgated by the administration:

1. The use of the Internet is a privilege. As the owner of both the available hardware and software, the Manchester Public Schools may withhold this privilege. Failure to adhere to the established guidelines may result in the loss of Internet access, disciplinary action and/or referral to legal authorities.
2. Use of the Internet must be in support of education and research consistent with the educational goals and objective of the Manchester Public Schools.
3. E mail may be used for educational or administrative purposes. E-mail is not private. Those who operate the system have access to all e-mail which may be monitored at any time by designated staff to ensure appropriate use for instructional and administrative purposes.
4. Users must not reveal personal information about themselves or others, including, but not limited to, the following: home address, telephone numbers, password, social security number or credit card number.
5. Users will comply with all state, federal and local laws, including, but not limited to, copyright laws and laws prohibiting harassment by computer.
6. Users must not interfere with others' work or with the performance of the computers, both hardware and software. Prohibited actions include, but are not limited to, the following: attempting to illicitly obtain or use passwords or screen names, entering closed areas of the network, introducing computer viruses or committing acts of vandalism, and/or any attempt to harm or destroy data of another user.
7. Users may not establish any official representation of the school or school district (e.g., Internet home page) without obtaining prior approval of school administration.
8. Each user will abide by the generally accepted rules of etiquette and applicable school policies, which include, but are not limited to, the following:
 - Use appropriate language. Do not write or send abusive/offensive messages or those which contain vulgarities
 - Chain letters and pyramid schemes (chain letters with money) are illegal.
 - Deliberate overload of the system (e.g., "spamming") is prohibited.

To ensure that only authorized students who understand the bounds of permitted use will have access to the Internet, Manchester Public Schools must obtain the written permission of a student's parent or legal guardian before the student may access the Internet, unless the student is 18 or older.

Legal Reference: Connecticut General Statutes, Section 53a-182b
Harassment in the first degree: Class D felony.

Reference: Cheshire Public Schools

Adopted: August 26, 1996 (as Policy 5145.3)
Revised: June 24, 2002 (as Policy 6141.321)



Manchester Public Schools

45 North School Street
Manchester, CT 06040



ADMINISTRATIVE OFFICES

Superintendent of Schools
647-3442

Assistant Superintendent
Personnel and Administration
647-3451

Assistant Superintendent
for Instruction
647-3447

Coordinator Pupil Services
and Special Instruction
647-3448

Business Manager
647-3445

month/day/year

Dear Parents/Guardians:

New technologies are shifting the ways that information may be accessed, communicated, and transferred. These changes may also alter instruction and student learning. The Manchester Public School System offers students access to the electronic information highway and computer service networks such as electronic mail and the Internet in accordance with Board Policy 6141.321, Acceptable Use of Technology.

Along with access to computers and people all over the world comes the availability of materials that may not be considered appropriate in the classroom. However, on a global network it is impossible to control all materials. Ultimately, the school staff, parents, and guardians of minors are responsible for setting and conveying standards that students should follow when using media and information sources.

The Board of Education supports and respects each family's right to decide whether or not to allow their child(ren) to access the Internet. Please take the time to sit down with your child(ren) to read and discuss the Rules and Codes of Ethics for School Computer Users. Then, sign and return the statement(s) provided as soon as possible.

Rules and Codes of Ethics for School Computer Users

Internet access is provided for students to conduct research and communicate with others in relation to school work. Access to network services is given to students who agree to act in a considerate and responsible manner. Students will use computer resources for educational purposes and in compliance with instructional activities. Parent permission is required unless a student is 18 years of age. Access is a privilege, not a right. Individual users are responsible for their use of the network. Therefore, based upon the acceptable use guidelines outlined in this document, the system administrators will deem what is inappropriate use. Decisions are final. The system administrators may deny, revoke, or suspend specific user access at any time.

District guidelines are as follows:

The use of the computer and the Internet must be in support of education and research and must be consistent with the academic expectations of the Manchester Public School System. Transmission of any material in violation of U.S. or State regulations including copyrighted, threatening, or obscene material is prohibited. Use for commercial activities by for profit organizations, product promotion, political lobbying, or illegal activities is strictly prohibited.

The user is also expected to abide by the following rules of etiquette:

- Be polite. Do not write or send abusive messages.
- Use appropriate language. Do not swear, use vulgarities, or any other inappropriate language.
- Transmission of obscene material is prohibited. Deliberately sending or receiving offensive messages or pictures from any source will result in immediate suspension of privileges.
- Do not reveal your or other students' personal addresses or telephone numbers.
- Do not communicate any credit card numbers, bank account numbers, or any other financial information.
- Electronic mail is not guaranteed to be private. People who operate the system do have access to all mail. Inappropriate messages can result in suspension of privileges.
- Do not use the network in such a way that would disrupt the use of the network by others.
- Any malicious attempt to harm or destroy data of another user will not be tolerated. Any questionable action will result in the suspension of privileges.

Very truly yours,

Principal

NOTE: Violation of any of the above mentioned rules and regulations will result in a loss of access and may result in other disciplinary or legal actions.

Acceptable Use of Technology Agreement

Parental Consent

I give the Manchester School District my permission to allow my child to access and use electronic information resources for educational and research purposes.

I have read this Acceptable Use Agreement and have explained and discussed its importance with my child. I understand that prior to my child's use of these resources, he/she will be instructed by school staff in the use of these resources and will also be instructed to follow the Board's Policy 6141.321, Acceptable Use of Technology.

I understand, and I explained to my child, that he/she may lose his/her privilege to use these resources at school and may face disciplinary action if he/she does not follow this Agreement and the Board's Policy. I understand that I may be held liable for costs incurred by my child's deliberate misuse of electronic information resources or of the District's electronic equipment or software programs.

I understand that the district will employ filtering programs, access controls, and active supervision by staff to protect students from any misuses and abuses as a result of their use of the district's electronic information services. I also understand that these controls, filters, and monitors are not foolproof and that my child may access material which I might consider controversial and offensive. I understand that the Manchester School District has no control over the content of the information available on the Internet. I will not hold the Board liable for materials my child obtains from these electronic information resources.

Signed: _____
(Parent or Guardian)

Date: _____

Acceptable Use of Technology Agreement Grades K-5

Student Agreement

I, _____, as a user of the Manchester School District's computers and computer equipment, agree to follow the policy of the Manchester Board of Education and the following rules:

1. I will only use the computer for assignments given by my teacher.
2. I will not try to access online information that is not related to my school assignment.
3. I will use the computer in a responsible manner at all times, following all rules.
4. I will be considerate of other computer users and their privacy.
5. I will use polite and appropriate language at all times while using the computer.
6. I will not give out any personal information about myself or anyone else while using the computer.
7. I will make responsible decisions while accessing and using computer equipment.
8. I will treat computer equipment carefully. I understand that misusing equipment may be considered a crime. Examples of misusing computers are breaking copyright laws, vandalizing equipment, tampering with hardware, software, and other users' files.
9. I will report any problems or improper messages to my teacher or to school personnel who are supervising me.
10. If I do not follow these rules, I know that I may lose my privilege to use the computers at school. I may be disciplined for not following the rules. I may have to pay for any damages that I cause by misusing computers or computer equipment.
11. If I do not use computers and computer equipment properly, my actions may be reported to those responsible for enforcing the local, state and/or federal laws.

Student Signature _____ Date: _____ Grade: _____

**Acceptable Use of Technology Agreement
Grades 6-12**

Student Agreement

I, _____ as a user of the Manchester School District's
(student name)

electronic information resources and computer networks, accept and agree to abide by the Acceptable Use of Technology Policy of the Manchester Board of Education and with the following pre conditions of my use:

1. I will use electronic information resources only for educational and research purposes and only as those purposes are consistent with the educational objectives of the Manchester Board of Education;
2. I will use electronic information resources in a responsible, ethical, and legal manner at all times;
3. I will be considerate of other electronic information users and their privacy, and I will use polite and appropriate language at all times while accessing and using these resources;
4. I will not give out any personal information about myself or anyone else while using these resources, other than my first name and school e mail address;
5. I will make responsible decisions while accessing and using these resources;
6. I will not knowingly degrade or disrupt electronic information resources, services, or equipment, and I understand that such activity may be considered to be a crime and includes, for example, tampering with computer hardware and software, vandalizing or modifying data without permission, invoking computer viruses, attempting to gain access to restricted or unauthorized networks or network services, or violating copyright laws;
7. I will immediately report any problems or breaches of these responsibilities, or any inappropriate messages received, to my teacher or to the school personnel who are supervising my use of these resources;
8. I will act responsibly at all times and will avoid all other activities that are considered to be inappropriate in the non electronic school environment;
9. If I do not follow these rules, I know that I may lose my privilege to use the computers at school, that I may be disciplined for not following the rules, and that I may have to pay for any damage I cause by my misuse of these resources;
10. I am aware that the inappropriate use of these resources can be a violation of local, state, and federal laws and that I may be prosecuted for violating those laws.

Student Signature _____ Date _____

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with ***will be supported through the library media curriculum.

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
KINDERGARTEN	demonstrates familiarity with computer keyboard and mouse		writes simple words using a word processing program	creates original drawings	demonstrates proper use and respect for the equipment
	responds to key terms: mouse, screen, click, keyboard, computer, printer, point, drag, mouse, cd-rom, disk, program		uses appropriate curriculum-related software		understands and follows the district's acceptable use technology policy
	demonstrates the ability to use audio players				
GRADE ONE	recognizes key terms: space bar, return, enter, delete, exit, quit, close, print, icon, desktop	accesses information on designated websites under direct teacher supervision	writes simple sentences using a word processing program	creates a finished product on the computer incorporating a graphic	demonstrates proper use and respect for the equipment
	demonstrates the ability to print		uses appropriate curriculum-related software		understands and follows the district's acceptable use technology policy

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with ***will be supported through the library media curriculum.

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
GRADE TWO	demonstrates specific simple keyboarding and word processing skills	accesses information on the internet with teacher assistance	demonstrates word processing skills to include centering, changing font, size, style, and color	creates a finished product using clip-art	demonstrates proper use and respect for the equipment
	recognizes key terms: monitor, shift, save, internet, eject, insert, server, file, cursor, menu bar, scroll, website		uses appropriate curriculum-related software		understands and follows the district's acceptable use technology policy
			demonstrates the ability to edit writing on the computer		uses internet only as instructed
GRADE THREE	***recognizes key terms: undo, clip art, keyword, reboot	***accesses information from electronic resources	uses appropriate curriculum-related software	creates a document utilizing text and graphics	demonstrates proper use and respect for the equipment
	demonstrates the ability to start up, shut down, and reboot computer	accesses information on the internet independently under teacher supervision	demonstrates word processing skills to include cut, copy, and paste	uses graphic organizing software	understands and follows the district's acceptable use technology policy
	***uses two hands on the keyboard	***uses technology in research to gather, store, and retrieve information			uses internet only as instructed
	***demonstrates the ability to start and quit a program	interacts with the Connecticut state webpage			observes legal and ethical guidelines for using and/or copying information
		***demonstrates the ability to access the card catalog by author, title, keyword, and subject			

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with ***will be supported through the library media curriculum.

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
GRADE FOUR	***recognizes the key terms: address bar, search engine	interacts with U.S. state webpages	creates simple multimedia presentations	creates a multi-paragraph, multi-page document	demonstrates proper use and respect for the equipment
	uses keyboarding program to develop proper techniques	***accesses information via the CT Digital Library (ICONN.com)		shares information via multimedia	understands and follows the district's acceptable use technology policy
		***uses technology in research			uses internet only as instructed
		***organizes, evaluates, and summarizes information from electronic resources			observes legal and ethical guidelines for using and/or copying information
		***demonstrates the ability to retrieve detailed information from the card catalog			demonstrates ethical use of the computer in relation to security, privacy, passwords, and personal information
		***retrieves information via internet search engine			cites sources appropriately

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with ***will be supported through the library media curriculum.

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
GRADE FIVE	***recognizes the key terms: address bar, search engine, URL, subscription database	***demonstrates ability to evaluate simple website	creates multimedia presentation	creates multipage document	demonstrates proper use and respect for the equipment
	demonstrates the ability to manipulate graphics	***demonstrates the ability to do an advanced search in the card catalog	refines graphic organizing skills	shares information via multimedia	understands and follows the district's acceptable use technology policy
	continues to use keyboarding program to develop proper techniques	***refines research skills utilizing the CT digital library	refines word processing skills (spell check, font changes, page setup manipulation)		uses internet only as instructed
					observes legal and ethical guidelines for using and/or copying information
					***understands and follows the district's acceptable use technology policy

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with ***will be supported through the library media curriculum.

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
GRADE SIX	***demonstrates the ability to follow middle school policies and procedures (i.e.. printing, storing)	***uses a variety of search engines to access research information	imports online image and clipart into a product	shares work produced on a computer	***cites sources appropriately
	***recognizes the key terms: chooser, desktop, CPU, hard drive, minimize, split screen, window, peripherals, and other platform specific terms	***differentiates between various internet domains (i.e.. .gov, .edu, .com)	demonstrates complex manipulation of graphics (i.e.. resizing...)	uses computer as a presentation tool	***demonstrates proper use and respect for the equipment
	***demonstrates ability to use computers in MAC and/or PC platforms	***refines research skills utilizing the CT digital library	refines skills utilizing presentation software		***uses internet only as instructed
	***demonstrates more advanced keyboarding skills	***uses Boolean search techniques	refines word processing skills (thesaurus, spell check, font changes, page setup manipulation)		***observes legal and ethical guidelines for using and/or copying information
	***demonstrates the ability to navigate between programs using split screens/minimizing	***demonstrates the ability to do an advanced search on the electronic card catalog in the middle school setting	uses graphic organizing software		***understands and follows the district's acceptable use technology policy
	***distinguishes between the terms software and hardware				***demonstrates ethical use of the computer in relation to security, privacy, passwords, and personal information.

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with *will be supported through the library media curriculum.**

Reinforcement of prior skills taught is an expectation at every grade level.

Strands:	OPERATIONAL SKILLS	ELECTRONIC RESEARCH SKILLS	PRODUCTIVITY SKILLS	COMMUNICATION and PRESENTATION SKILLS	ETHICAL USE
GRADE SEVEN	***recognizes the key terms: scanner, digital camera, digital camcorder	***further refines internet research skills	uses word processing skills to develop a brochure	presents work produced on a computer	***cites sources appropriately
	independently operates scanner and digital camera	***evaluates and summarizes information from electronic sources	uses a spreadsheet program to create a graph	uses computer as a presentation tool	***demonstrates proper use and respect for the equipment
	uses camcorder with adult supervision		creates original drawing on a computer		***uses internet only as instructed
	demonstrates proper keyboarding technique		uses a spreadsheet program to create a table		***observes legal and ethical guidelines for using and/or copying information
					***understands and follows the district's acceptable use technology policy
					***demonstrates ethical use of the computer in relation to security, privacy, passwords, and personal information.

Technology Scope and Sequence

All skills in K-8 are expected to be integrated into grade level curriculum.

Items marked with *will be supported through the library media curriculum.**

Reinforcement of prior skills taught is an expectation at every grade level.

GRADE EIGHT	demonstrates continued improvement in keyboarding skills to increase productivity and accuracy	***uses a variety of sites and resources for research	***creates a works cited page	shares work produced on a computer	***cites sources appropriately
			demonstrates continued fluency in word processing to increase productivity	uses computer as a presentation tool	***demonstrates proper use and respect for the equipment
					***uses internet only as instructed
					***observes legal and ethical guidelines for using and/or copying information
					***understands and follows the district's acceptable use technology policy
					***demonstrates ethical use of the computer in relation to security, privacy, passwords, and personal information.

Manchester High School Technology Scope and Sequence

Key: I=introduce, R=reinforce, M=maintain

I.	Operational Skills	9	10	11	12
	A. Computers				
	1. Demonstrates ability to operate a PC based school computer	R	R	M	M
	2. Successfully logs into school server using their unique username and password	R	R	M	M
	3. Distinguishes between and access various school folders to create, save, and retrieve files	I	R	M	M
	B. Other				
	1. Demonstrates ability to use a computer to access other devices such as printers and storage media	R	M	M	M
	2. Demonstrates ability to operate digital equipment such as scanners, cameras, and video projectors	R	M	M	M
II.	Electronic Research Skills				
	A. Internet				
	1. Demonstrates ability to navigate the World Wide Web using basic browser functions	R	R	M	M
	2. Demonstrates ability to download, save, and upload Internet files	I	R	M	M

	9	10	11	12
3. Demonstrate ability to copy graphics and text from Internet sites to other productivity software	R	R	R	M
4. Demonstrate ability to successfully and efficiently print information from the Internet	I	R	R	M

B. Databases

1. Demonstrates ability to use advanced features of an electronic database to access pertinent information	I	R	M	M
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C. Card Catalog

1. Demonstrates ability to access the high school's card catalog to access information resources	I	R	M	M
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III. Productivity Skills

A. Word Processing

1. Demonstrates ability to use word processing software to create written products	R	M	M	M
2. Demonstrates ability to use advanced features of word processing software	I	R	R	M
3. Demonstrates advanced keystroke skills to create written products	I	R	R	M

B. Graphs and Spreadsheets	9	10	11	12
1. Demonstrates ability to use advanced graphing software and hardware to create charts and timelines	I	R	R	M
2. Demonstrates ability to use spreadsheet software to create spreadsheets	I	R	R	M
3. Demonstrates ability to use advanced graphing software and hardware to express curricular concepts	I	R	R	M
4. Demonstrates ability to use spreadsheet software to express curricular concepts	I	R	R	M

IV. Communication / Presentation Skills

A. Multimedia tools

1. Demonstrates ability to use multimedia software to create a simple multimedia presentation	R	R	M	M
2. Demonstrates ability to use advanced features of multimedia software to create a complex multimedia presentation	I	R	M	M
3. Demonstrates ability to use interactive curricular based software	R	R	M	M

B. Web site creation

1. Demonstrates ability to use simple website generating software to create simple web pages		I	R	M
2. Independently determines the most appropriate format to present information for a research task and gathers the necessary materials to incorporate in that format		I	R	M

C. E-mail	9	10	11	12
1. Demonstrates ability to retrieve and send information from/to home for research purposes	I	R	R	M
2. Demonstrates ability to communicate with public organizations to retrieve information I (college applications, health, etc..)		R	R	M

V. Ethical Use of Technology

1. Demonstrate responsible use of the school's computer equipment	I	R	M	M
2. Demonstrate responsible use of the school's computer software	I	R	R	M
3. Demonstrate responsible use of the school's computer network	I	R	R	M

ELEMENTARY CLASSROOM DESIGN SUGGESTION

