

Voorheesville Central School District

Technology Plan 2009-2012

Created By: District Technology Committee 2008-2009

Committee Members:

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This plan was completed following the guidelines provided by NCLB, (No Child Left Behind) NYSED, (New York State Education Department and E-Rate.

It includes the following schools:

C. A. Bouton High School

Voorheesville Middle School

Voorheesville Elementary School

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Mission Statement

The mission of the Voorheesville Technology Committee is to identify instructional and administrative technology goals and objectives for the district and to align those goals with those espoused in the New York State Technology Standards documents and within the NETS Technology Standards document. To develop an ongoing technology plan that incorporates those goals and objectives, and to develop a timeline for the implementation of the recommendations made in this plan.

Technology Committee Objectives

In alignment with the New York State Regents Goals 1, 2, and 6 for the integration of technology into schools in New York, Voorheesville School District commits to the following objectives for this plan.

Regents Goal 1

All students will meet high standards for academic performance and personal behavior and demonstrate the knowledge and skills required by a dynamic world.

Create a district-wide repository of student performance data that permits longitudinal analysis across years.

Create a web-based information resource that gives teachers and students access to instructional materials, educational content and professional development tools.

Voorheesville District Technology Goal #1:

Reinforce K-12 curriculum by integrating National Educational Technology Standards (NETS) and Information Fluency Skills into the curriculum.

Rationale: Continuous and seamless integration of technology throughout the curriculum allows for effective context-based learning, direct transfer of technology skills to other subject areas, and more equitable access for all students. Increasing technology literacy and information fluency is required to prepare all students with 21st century skills.

Action Steps:

- 1) Infuse the ISTE's (International Society for Technology in Education) K-12 NETS competencies (as a base level for technology literacy) into the existing curriculum. (see Appendix 1: NETS Standard for Students)
- 2) Integrate the NETS and Information Fluency Skills into the district's curriculum for all grade levels and subjects. (see Appendix 2: Information Fluency Skills)
- 3) Integrate the NETS and Information Fluency Skills into the district's curriculum mapping for all grade levels and subjects.
- 4) Coordinate classroom technology integration models with department chairs and subject area teacher-leaders, including math specialist, reading specialist, and Special Education teachers.

Regents Goal 2

All educational institutions will meet Regents high performance standards.

Provide educators and the public with online access to school report cards and educational data

Assist the school district and libraries by providing leadership, advocacy, standards, guidelines and financial support for upgrading technology and managing data.

Voorheesville District Technology Goal #2:

To continually provide teachers, administrators, support staff, and other members of the community with relevant technology-related professional development with a focus toward improving student achievement.

Rationale: The most critical ingredient in successful technology use is reliability, and the most critical ingredient in professional development for teachers is with timely support for their work.

Action Steps:

- 1) Increase focus on individual teacher professional growth plans to accommodate the varying skill levels of staff members. Focus on developing teacher in-service program that increases integration of technology into the learning environment.
- 2) Use Teacher Technology Mentors for one-on-one & small group training.
- 3) Use Model Schools Training as an in-service option for staff development.
- 4) Explore alternative ways to train. For example, online classes, college courses, afterschool workshops and other resources from community experts.
- 5) Increase Technology Professional Development by giving staff access to technology conferences, workshops, and classes at the local level and through NERIC, the Capital Region Teacher Center, and NYSCATE (New York State Association for Computers and Technologies in Education)
- 6) The district provides regular support and advocacy for the improvement of the district K-12 library system. Both elementary and secondary libraries contain computers with online access and search capabilities that are efficient and effective using broadband access.
- 7) Perform longitudinal studies so staff can rate their technology skills, needs, and growth. (see Appendix 5, Teacher Survey Example)

- 8) Use the ISTE's 2008 NETS for teachers as a guide for teacher staff development.
(see Appendix 3, 2008 NETS Standards for Teachers)
- 9) Use the ISTE's NETS for administrators as a guide for administrator staff development.
(see Appendix 4, 2009 NETS Standards for Administrators)
- 10) All district personnel will receive training in the analysis of student data. This data will be used on a regular basis to address student needs and identify areas of strength within the curriculum. This analysis will occur on a program basis, student basis and district basis over time.
- 11) Development of discipline specific training in regard to technology integration in content areas.
- 12) Administrate a technology survey/questionnaire to new staff.
- 13) Create more in-house professional development technology wokshops

Voorheesville District Technology Goal #3:

Expand the Student Information System and expand Data Warehousing to provide appropriate data and information to district staff and the community.

Rationale: Voorheesville needs to use a web-based system to improve the school home connection and features for administration, teachers, and parents. This will offer a higher level of usability and reliability, supply data and information for program content evaluation.

Action Steps:

- 1) Continue expanding the Student Information System, eSchooldata.
 - a) This would include having a centralized attendance, gradebook, and student info database.
 - b) Internet web access for teachers, parents, and administrators.
 - c) Open a parent Portal, so parents can track student's attendance, grades, assignments, and behavior.
 - d) Integrations of data warehousing, TransFinder (Transportation), Cleartrack 200 (special education), Lifetouch (student photos), lunch program (Nutrikids) , library programs, student course enrollment, Datamentor, NYstart, and master scheduling.
- 2) Continue development of data warehousing to support curricular analysis, program effectiveness and district administrative functions.
- 3) Maintain an archival of past years' data.
- 4) Upgrade to the next version of eSchooldata and provide training for teacher and staff.

Regents Goal 6

The district work environment will meet high standards.

Build computer technology that is reliable, open, flexible and secure, using web-based standards

Prioritize technology investments based upon consistent and open criteria, including business priorities, cost effectiveness and risk.

Voorheesville District Technology Goal #4:

Enhance communications with Parents and the School community through the use of technology.

Rationale: The School's web site and printed brochures provide a key link between parents and schools, and promoting the work and accomplishments of students generates support for the technology program and the School District.

Action Step:

- 1) Enhance the School's website with timely updated information.
- 2) Reduce printed brochures and other public relations material.
- 3) Use technology to communicate and keep parents informed.
- 4) Through parent portals explore new ways to inform families and the community.
- 5) Create an intranet to improve staff communications and resources.

Voorheesville District Technology Goal #5:

Extend coordination and leadership for integrating technology at the district and local school levels.

Rationale: District coordination and leadership allows more effective use of limited resources and provides a basis for looking at technology decisions across all the schools and students. Local leadership is required to provide teachers with the time, resources and encouragement to adapt their curriculum to integrate technology.

Action Steps:

- 1) Maintain the District Technology Coordinator as a full time position. District Technology Coordinator Job Description – (see Appendix 5)
- 2) Maintain NERIC Technical Staff at .4 FTE (2009-10), then to .6 or .8 FTE (2010-11)
- 3) Maintain a computer Teacher Assistant (TA) at the Elementary School and at the MS/HS. Expand the role of computer Teacher Assistant (TA) for individual and small group support.
- 4) Establish teacher/staff support by adding a Technology Mentors to each building.
 - a) Support a 1.0 FTE Technology Mentor position at the Elementary School
 - b) Support a .5 FTE Technology Mentor position at MS/HS. (2009-10)
 - c) Technology specialist will ensure the success of integrating technology throughout the district by delivering research-based professional development models.
 - d) Technology mentors will research, explore and propose new technologies.
- 5) Educate the faculty about the kind of support available from the Computer TAs, Computer Teachers, Technology Mentors, and District Coordinator.

Voorheesville District Technology Goal # 6:

Maintain the infrastructure and equipment necessary to provide technology integration and service throughout the district.

Rationale: The second most critical ingredient for the success of the technology program in the district is the wide area network coupled with district hardware purchasing. These have allowed us to maximize our tech support effectiveness through imaging and remote computer management. It has also allowed staff access to resources which were previously unavailable.

Action Steps:

- 1) Keep upgrading the switches and network components that serve the district.
- 2) Increase the line speed between the ES and MS/HS building to a gigabyte line.
- 3) Increase the number and speed of data lines going into the classrooms as needed.
- 4) Add to the wireless network by increasing the number of hubs and speed of these hubs in each building. Create a secured controllable wireless manage system.
- 5) Explore updating the phone system to a Voice over IP system. (2010-11).
- 6) Maintain a helpdesk to reduce response time and reduce technology problems.
- 7) Maintain data disaster recovery plan to safeguard the school's electronic information. (see Appendix 7)

- 8) Add technology services such as: teleconferencing, online learning, emerging technologies, video and sound editing, digital story telling, CAD, 3d graphics and modeling, computer programming and web design.
- 9) Research and design the classroom of the future, so information and integration will be accessible when designing future classrooms.
- 10) Provide age appropriate instruction and monitoring on cyber (internet) safety

Voorheesville District Technology Goal #7:

Continue financial support for the technology programs through various sources, including grants, gifts, donations, and local funds.

Rationale: Funding is necessary to maintain a reasonable technology program, and local budget dollars are generally not sufficient to do that in this district, so outside sources of revenue must be generated and maintained.

Action Steps:

- 1) Increase the total technology hardware spending (as budgets allow) to:
 - 2008-09 - \$90,000
 - 2009-10 - \$68,000
 - 2010-11 - \$70,000
 - 2011-12 - \$70,000
- 2) Seek Technology Grants at the State, Federal title programs, and private Foundations levels.
- 3) Work with State Education Department (CREATE) and public companies (ex. GE Elfun Society) for Technology donations.
- 4) Use NERIC for services, support and hardware purchases.
- 5) Increase the integration of technology in the Elementary School and Middle School by increasing access to technology by:
 - a. Add netbook computer laptop carts. (2009-11)
 - b. Purchase Projection cameras and Smartboards interactive systems. (2009-11)
 - c. Increase the number of computer projectors. (2009-11)
 - d. Audio equipment for classroom use and Rosette Stone labs.

Voorheesville District Technology Goal #8:

Implement a computer usage plan that replaces machines every seven years.

Rationale: To ensure appropriate functionality of the computers to meet the needs of teachers and students.

Action Steps:

- 1) Replace computers and other technologies at a faster pace to insure no computers are used beyond 7 years or their functional level.
- 2) Upgrade all PC's to Window XP (or better) and all Macintosh's to OSX 10.3 (or better) operating systems by the 2009-10 school year.
- 3) Standardize on software that is current, industry standard, and supports best practices in education.
- 4) Provide the newest technologies and hardware for those who need access to it.

Voorheesville District Technology Goal #9:

To explore and embrace Web 2.0 technologies.

Rationale: Technologies such as blogging, twitter, RSS feeds and online communities have changed the way students and society uses the Internet. We need to inform students and staff of the safe and proper ways to use these new digital tools, and educate staff on the ways to integrate and maximize the benefits of Web 2.0 technologies.

Action Steps:

- 1) Explore ways to use social networking, blogging, twitter, and RSS feeds technologies, in the classroom, workplace, and within the community to improve communication and productivity among students, staff and community members.
- 2) Develop online learning opportunities
- 3) To embrace the 21st Century Skills and the technologies that will help teach these skills.
(Appendix 6, 21st Century Skills guide)
- 5) Use web software such as Flickr, youtube, wiki's and blogs in order to expose students to collaborative assessment of their work.

Technology Inventory 2009

Elem. School

	K	1st	2nd	3rd	4th	5th	Labs	others	Libr.	Lap cart	laptops	Total	
classrooms	2	5	5		4	4	4	1	19	1	2	47 classrooms	
projector	2	4	4		4	4	4	1	3	1		27 projectors	
Smartboards	1	4	4		2	3	3	1	1			19 Smartboards	
Computers	7	21	30		20	7	22	27	35	15	46	2	232 Computers
Printers	2	5	6		4	4	4	3	20	1	2		50 Printers
Scanners	0	2	2		1	1	1	1					8 Scanners
Elmo	1												1 Elmo
Camera		1											16 Camera
Camcorder													3 Camcorder
Dana's													33 Danas
Alphasmart													6 Alphasmarts

Middle School

	6th	7th	8th	Labs	others	Lap cart	laptops	Total	
classrooms	4	4	4		1	4	1	2	20 classrooms
projector	4	4	4		1	1			14 Projectors
Smartboards	1	1	0		1	1			4 Smartboards
Computers	19	18	15		28	19	22		123 Computers
Printers	4	5	4		2	4	1		20 Printers
Scanners	1	1			2	2			6 Scanners
Elmo		1							1 Elmo
Camera		6			1				7 Cameras
Camcorder					0				0 Camcorder
Dana's					0				0 Dana's

Technology Inventory 2009

High School	English	Math	Science	Soc. St.	Fine Arts	For. Lang.	CTE	Sp. ED.	others	lab	140	lib	laptop carts	
classrooms	5	5	7	5	6	2	4	4	7		1	1	3	48 classrooms
projector	3	2	5	4	1	0	3	1	1		1	1		22 projector
Smartboards	1			2	0	0	0							3 Smartboards
Computers	16	5	17	13	26	3	63	16	11		33	24	74	301 Computers
Printers	4	4	6	4	6	3	6	5	6		2	2	4	52 Printers
Scanners		2			2		6	4						14 Scanners
Elmo		1					1	1						3 Elmo
Camera					8		10							18 Camera
Camcorder	6						16		1					23 Camcorder
Flat LCD TV		1				1			1					3 Flat LCD TV
Laptops in rm		2	1	2	2		19	1	1					27 Laptops in rm

District Admin	DO	Elem	MS	HS Admin	HDCafe	HS Guid	Nurse	Mainten	Food	Services	Teacher Workroom	HS Department	
rooms	5	4	4	7	1	5	2	3	2	3	3	1	37 rooms
projector	0	0	0	0	1	3	0			0	0	0	4 projector
laptops	1	1	1	4	2	1	0			0	0	3	13 laptops
Computers	10	6	3	7	2	6	2	5	2	4	4	3	53 Computers
Printers	4	2	1	3	1		2	4	2	3	3	1	23 Printers
Network copier	1	1		1						4	4		7 Network copiers
Camera	2		1										3 Camera
Nutrikids computers									3				3 Nutrikids computers

Equipment Purchase

Items	Amount	Cost	Total
Year 2008-09			
Lcd projectors	10	\$700.00	\$7,000.00
Digital camera/camcorder	5	\$500.00	\$2,500.00
Smartboards	13	\$1,300.00	\$16,900.00
Printers	10	\$300.00	\$3,000.00
Scanner	4	\$150.00	\$600.00
Dell Desktop Computer	20	\$560.00	\$11,200.00
Dell Laptop Computers	30	\$660.00	\$19,800.00
Apple Mac Computer	15	\$1,000.00	\$15,000.00
Apple MacBook laptops	2	\$1,200.00	\$2,400.00
Network Server	1	\$800.00	\$800.00
Elmo	2	\$1,400.00	\$2,800.00
Teleconference system	1	\$750.00	\$750.00
Science digital probes	1	\$3,500.00	\$3,500.00
Fees and leasing charges	1	\$4,000.00	\$4,000.00
		Total 08-09	\$90,250.00
Year 2009-10			
cart	1	\$1,500.00	\$1,500.00
Netbook laptops	30	\$370.00	\$11,100.00
Lcd projectors	6	\$700.00	\$4,200.00
Digital camera/camcorder	4	\$500.00	\$2,000.00
Smartboards	10	\$1,200.00	\$12,000.00
Printers	8	\$250.00	\$2,000.00
Dell Desktop Computer	15	\$600.00	\$9,000.00
Dell Laptop Computers	15	\$680.00	\$10,200.00
Apple Mac Computer	6	\$1,000.00	\$6,000.00
Apple Macbook laptops	3	\$1,100.00	\$3,300.00
Elmo	3	\$1,400.00	\$4,200.00
Fees and leasing charges	1	\$2,700.00	\$2,700.00
		Total 09-10	\$68,200.00
Year 2010-11			
Netbooks laptop	28	\$350.00	\$9,800.00
Lcd projectors	2	\$800.00	\$1,600.00
Digital camera/camcorders	4	\$500.00	\$2,000.00
Smartboards	5	\$1,200.00	\$6,000.00
Printers	4	\$350.00	\$1,400.00
Dell Desktop Computer	10	\$560.00	\$5,600.00
Dell Laptop Computers	10	\$650.00	\$6,500.00
Apple Mac Computer	0		\$0.00
Apple Macbook laptops	12	\$1,100.00	\$13,200.00
Flat panel TV	2	\$1,000.00	\$2,000.00
Wireless Management	1	\$9,700.00	\$9,700.00
Network Server	1	\$6,600.00	\$6,600.00
Elmo	2	\$1,400.00	\$2,800.00
Fees and leasing charges	1	\$2,800.00	\$2,800.00

Equipment Purchase

	Total 10-11	\$70,000.00
Year 2011-12		
Netbooks laptop	28	\$9,800.00
Lcd projectors	2	\$1,600.00
Digital camera/camcorders	4	\$2,000.00
Smartboards	5	\$6,000.00
Printers	4	\$1,400.00
Dell Desktop Computer	10	\$5,600.00
Dell Laptop Computers	10	\$6,500.00
Apple Mac Computer	12	\$12,000.00
Apple Macbook laptops	5	\$5,500.00
Flat panel TV	3	\$3,000.00
Newwork switch	1	\$2,200.00
Nerwork Server - Apple	1	\$6,000.00
Elmo	4	\$5,600.00
Fees and leasing charges	1	\$2,800.00
		\$70,000.00

Budget and Future Planned Activity

	Current year 2008-2009	Year one 2009-2010	Year Two 2010-2011	Year Three 2011-2012	
Peripherals	8 lcd projectors 5 Cameras/camcorder 13 Smartboards 3 Nikon D40s 5 Printers	6 lcd projectors 4 Digital Cameras/Camcorder 6 Smartboards 0 Printers 2 Elmo	6 lcd projectors 4 Camera/Camcorders 5 Smartboards 4 Printers 2 42" Plasma Displays	6 lcd projectors 3 Camera/Camcorders 4 Smartboards 4 Printers 2 42" Plasma Displays 5 Cell phones	
Hardware	Purchase 2nd - 24 Laptops Cart ES Replace/upgrade Music, & Art Computers (18 computers) Replace computers in MS lab (26 computers) Purchase 10 Dell laptops to upgrade HS laptop cart Replace 30 Teachers/Student computers DO/HS/MS/ES Replace 6 computer in Room 154 High School - Apple iMac Move old computers into classrooms or retire	upgrade Apple iMac in 154 HS (6 iMac) Purchase 24 Netbook cart - Elem. School Move one cart to HS 6 Netbooks to High School 10 Computers desktop for DO/ ES/ HS/MS Move old computers into classrooms or retire 10 Dell laptops upgrade cart #1 HS Upgrade Internet filter	Upgrade Rm 140 HS Replace 12 computers in Lab 154 (12 computers) Replace Dell #1 cart (20 Laptops) Replace ES/MS/HS/DO Teachers/staff (10 computers). Move old computers to Classrooms Replace Student & Staff Server Wireless Management System	Replace HS 122 Lab (21 Computers) Replace Dell Laptop #2 Cart (20 laptops) Replace ES/MS/HS Teachers 5+ year old machines (15 computers) Move old computer to classrooms Upgrade Phone System	
Staffing	.4 NERIC Support 1 FTE District Coor. 1 FTE Elem. Tech Mentor 2.0 Teaching Assts. .25 Communications Team .5 Tech Mentor HS/MS	.4 NERIC Support 1 FTE District Coor. 1 FTE Elem.Tech Mentor 1.0 Teaching Assts. .5 Tech Mentor HS/MS .25 Communications Team	.8 NERIC Support 1 FTE District Coor. 1 FTE Elem.Tech Mentor 1.5 Teaching Assts. .5 Communications Team	.8 NERIC Support 1 FTE District Coor. 1 FTE Elem.Tech Mentor 1.5 Teaching Assts. 1.0 Tech Mentors HS/MS	
Training & Assessment	<ul style="list-style-type: none"> • Model Schools •Align NETS standards with K-5 curriculum •\$25,000 Technology Integration Grant • Survey Student skills level • Staff Training for new SIS 	<ul style="list-style-type: none"> • Curr. Mapping training • Model Schools •Develop peer to peer training (Tech specialist) • Alignment of NETS to be completed K-8 • Local training "Tech Mondays" 	<ul style="list-style-type: none"> • Information Fluency Curriculum -teacher/students •Model Schools •Survey Staff for skill level •Ongoing training in Curr. Mapping & SIS • Parent Portal for SIS 	<ul style="list-style-type: none"> •Model Schools •Ongoing training in Curr. Mapping & SIS 	
Hardware Budget	\$90,000	\$ 68,000	\$70,000	\$70,000	

Evaluation Measures for the Voorheesville Central School District Technology Plan

1. Conduct a district-wide survey to administrators, teachers, and staff to determine levels of implementation and skill level of each. Survey will be given in years two, and so each staff member can assess their growth, and needs.

2. Continue with a district wide technology committee to supervise the implementation of this technology plan.

3. Use the District's data from Data Warehousing, the NYStart and other data sources to determine and analyze where technology can benefit the content areas.

4. Assess the impact on student learning by observing:
 - a. Examples of student work
 - b. Example of teacher created materials that incorporate technology
 - c. Student interviews and surveys
 - d. Classroom implementation of technology
 - e. Number of staff taking in-service technology classes

5. Develop a best practice area on the school's website that will showcase student and faculty work.