

POCANTICO HILLS CENTRAL SCHOOL DISTRICT
599 Bedford Road Sleepy Hollow, New York 10591

TECHNOLOGY PLAN 2008-20011
Update

Originally Developed November 2004 by:

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INTRODUCTION

This report updates the Technology Plan originally prepared for the 2005-2008 technology initiative. The original plan reported that in late November 2004, a committee comprised of teachers, administrators and community members was formed to examine the state of Pocantico Hill School's technology. The committee found that the school district's hardware was on average eight years old, so old, in fact, that the staff frequently couldn't access the Internet in ways that are meaningful for classroom instruction. The committee also found computers that were so slow that teachers were unable to run state-of-the-art educational software or use e-mail to communicate with one another. Because of limited in-house technical resources, the committee found even working the newest wireless laptops was cumbersome. Some students had reported trying out two or three laptops before finding one that works.

Compared to other area districts, affluent and otherwise, Pocantico Hills School (PHS) had fallen behind. The District had a decent network infrastructure thanks to a recent upgrade completed during the three-year technology plan (2001-2004). But because of the district's outdated equipment, the district had not realized the promise of technology in education at the school. Valuable teaching tools that help with assessment and individualized instruction were not being taken advantage of.

With the recommendations included in the technology plan PHS will continue to remain in line with national and state technology guidelines, many of which are already in use in exemplary school districts all over the country. We will continue to look at our hardware and software needs, innovative technology we'd like to introduce, as well as the critical need for a staff person whose responsibility will be to champion technology and its use at the school.

In the committee's opinion there could be no greater investment in our children's future than this much-needed upgrade. Armed with the right technology, PHS will be better able to accomplish its mission: to help students attain academic excellence and gain the communication and problem-solving skills they'll need to succeed in the 21st Century.

BACKGROUND

On November 1, 2004, the board reconvened the district's technology committee to prepare a short and long term technology plan for the school district. Using the strategic framework as a guide, the committee started its work almost immediately and determined that its mission would be *to provide a reliable, efficient infrastructure of technology resources that supports and enhances the long-term goal of ensuring each child is reaching her/his full academic potential within the Pocantico Hills School District.* Committee members met on a weekly basis, assessed PHS's current technology, discussed technology needs and possible initiatives with PHS staff, attended two conferences at BOCES (Board of Cooperative and Educational Services), and visited neighboring schools to learn more about their experiences with effective educational technology. In addition, the committee also gathered information on successful

technology initiatives at nationally-recognized model schools and examined U.S. and New York State Department of Education recommendations – both based on ISTE (International Society for Technology Education) guidelines – to help determine our goals.

In no way, did the committee consider the technology plan to be a comprehensive final plan, rather it is understood that this is a dynamic process that will continue to evolve and to be used to continue to evaluate the District's technology needs. Funding had been included in the 2005-2006 school year to enact an Installment Purchase Agreement with BOCES. The Board of Education has found this method of funding to be a valuable tool for the District, and therefore funds have also been included in the 2006-2007, 2007-2008 and 2008-2009 school budget to continue the implementation of the technology initiative.

Building on the work of the committee reconvened by the Board in November 2004, the District's "Strategic Framework and Goals" adopted by the Board of Education for 2007-2008, stated that the District will enhance home and community communication through the use of the District's technology, develop an automated student grade reporting system for the middle school, continue to implement the math curriculum through multiple resources including new math textbooks and software, continue to develop social studies curriculum maps, develop science curriculum maps, and continue to introduce instructional technologies to new and existing staff.

THE STATE OF POCANTICO'S TECHNOLOGY PRIOR TO 2005-2006

Computers are an integral part of the instructional program at PHS. Beginning with the first grade, students are exposed to a host of computer-related skills in the Computer Lab, and have limited opportunities to apply those skills through classroom work and special projects which strive to integrate technology into the curriculum. Web pages created by PHS staff and students have won national recognition. PHS students and staff have a high degree of computer awareness.

In 1985, Pocantico Hills School established its first computer network. Initially, the network supported a computer lab housing 17 Apple IIe computers. During the 1994-95 school year, the school's local area network, computer lab and building wiring were upgraded. The following year, the Apple computers were replaced by Dell workstations and the library was computerized. In 2000, PHS added a mobile wireless lab, and has upgraded the workstations in the computer lab. Since then, the school has invested little in technology. From 2002 to 2004, PHS spent an average of \$27,000 per year, or \$75 per student, in computers and computer supplies, school records show. This expenditure compares very poorly to schools that are considered to be technologically advanced. According to the article "The costs of technology-rich schools", and data from QED and RAND. A sample of these schools shows an average expenditure per student of approximately \$330 per student. Moreover, PHS's investments in technology over the five years before the implementation of the 2005-2006 technology plan fall short of any state or federal recommendations or guidelines. According to a report published in the Public Policy Institute of New York State highlighting these guidelines, technology

spending should account for 5% of the total school budget. District records show that during the last three years prior to 2005-2006, PHS has spent less than 0.5% of its total school budget on technology. Currently, PHS has 102 workstations for approximately 360 students and staff. Our ratio is 3.5:1 students per computer. Although the ratio is a good one by national standards (3:1 in 2003), it's very misleading due to the fact that nearly half of our workstations were nine years old and are first generation Pentium 75 or 133 MHz equipped with Windows 95 and 98 operating systems. Given this fact, our true working ratio is 7: 1. The balance of our workstations was three to four years old, already outdated by technology standards. In 2004-2005, the district purchased 16 new computers to be used by administrative, library and special needs staff. Overall, the existing equipment was too old, far too slow and limited in memory to process the complex graphics, visual, text and audio featured on the Internet and in the latest educational software. While we have a wireless laptop lab, its use is limited to a few classrooms in the middle school due to access and physical constraints in the building. PHS also has an award-winning school web site, but because it utilizes old technology, staff members can't take advantage of the latest software that allows parents to access school resources from home.

News about our network infrastructure isn't as discouraging. PHS installed two new servers (2004), and the network speed had been completely upgraded to 100 MB, sufficient by current standards but not state of the art. Prior to 2007-2008 the connection to the internet was a dedicated T1. In 2007-2008 the internet connection was upgraded to a TLS line to accommodate new hardware put into place since 2005-2006. Besides minor upgrades to switches and adding wireless access points, infrastructure improvements for the moment are minimal.

When it comes to maintenance and support, PHS has historically relied on a piecemeal approach. If a teacher had a specific request or problem they addressed it with the district's assistant superintendent or Computer Lab Instructor who provided whatever support possible, and then called upon BOCES, if needed, our regional source for technical assistance.

Professional development for teachers and staff, perhaps the most critical component of any successful technology plan, was also limited. Teachers were encouraged to utilize their professional development allocations to attend conferences and workshops related to the use of technology in their instructional practices. However, as more wide-ranging technology, software, and Internet-based content was made available, the District's challenge was to better prepare teachers to be aware of and use these powerful tools. Teachers and staff reported that they would welcome the opportunity for a more comprehensive approach and improved teacher training.

Through the use of Installment Purchase Agreements with BOCES beginning in 2005-2006 Pocantico Hills has installed wireless LAN, new routers, switches, 157 workstations, 36 printers, 26 scanners, 32 white boards, 54 video monitors, two new wireless carts with 24 laptops each, and a variety of network software.

PHS TECHNOLOGY GOALS

To support the mission of PHS as stated in its strategic framework, the committee is recommending the following broad goals be established:

1. Ensure funds allocated to technology are sufficient and are used in the most efficient manner.
2. Improve and maintain a ratio of 2.2:1 students per computer with no workstation older than four years of age.
3. Enhance and provide effective professional development and technology training for teachers and staff.
4. Evaluate and implement existing and innovative technology that supports the long-range academic goals of PHS.
5. Provide a technical support structure that quickly responds to user hardware and software issues.
6. Maintain a responsive, reliable and efficient network and internet infrastructure.
7. Establish integrated, interoperable data systems to provide for better allocation of resources, greater management efficiency, and technology-based assessments of student performance.
8. Improve communication between teachers, parents, and staff through the use of technology.
9. Ensure compliance with technology standards and regulations at the state and national levels.

SUGGESTED IMPROVEMENTS

To achieve the goals stated in this technology plan, the following areas have been targeted as needing attention and improvement:

Funding for Equipment and Software Upgrade

The most immediate goal is to continue to equip each classroom, and each teacher, with modern workstations. To accomplish this goal, the District will need to allocate and set aside funds on a yearly basis for workstation purchases and upgrades. To prevent obsolescence, the implementation of a three-year cycle to replace outdated workstations has been recommended and accepted by the Board of Education through participation in an Installment Purchase Agreement with the local BOCES. This will enable the District to obtain equipment and to maintain more predictable and level budgeting.

Major advances have been made in educational software in recent years. The Technology committee has organized the software issue into two broad categories: specific grade or subject software; and global software, which are purchased by the District for widespread use. The plan will emphasize the former, with teachers having adequate funding and assistance from the district's technology specialist to purchase

and use appropriate grade-level software. To accomplish this, the District has initiated a Software Acquisition Team, a subcommittee of the Technology Committee which will assess and investigate the purchase of "global" software for use in the classroom, and to ensure compatibility with District resources and curriculum. As teachers use the new workstations and Smart Boards, and continue with staff development, their input will help the Software Acquisition Team to choose appropriate "global" software for District use during this phase of the technology plan.

Technology Integration Specialist and Technical Support Specialist

In 2005-2006 the district hired a technology Integration Specialist and a Technology Support Specialist through a BOCES CoSer. These individuals serve the District three days per week in response to the Committee's recommendation as follows: Apart from providing technical support, the Specialists will assist in the selection of appropriate Internet-based or software content and will focus on integrating technology with our academic curriculum so meaningful learning can take place. The Specialists will provide staff development through workshops and one-on-one training for staff and teachers as needed. Ensuring PHS is in compliance with national and state standards would also fall under these positions, and will ensure that the District's hardware and infrastructure will continue to support the District's educational programs. The District's 2008-2009 budget provides for the continuation of these Technology specialists.

Professional Development

The District hired a curriculum integrations specialist three days per week through a BOCES CoSer in response to the Committee's recommendation as follows: It is critical that professional development be at the forefront of our Technology Plan in order to ensure its ultimate success. Only with sufficient training can teachers and staff become confident in the use of the technology that will become a living part of their classroom. Staff development days, in addition to on-going support by a technology curriculum Specialist, will need to be dedicated to technology education. District staff will continue to be encouraged to attend conferences and workshops related to the use of technology in their instructional practices. In addition to the traditional conference and workshop format, the use of online workshops will enable the district to expand its capacity to provide staff development offerings to meet this ever-growing need.

Interactive White Boards

Interactive white boards, sometimes referred to as Smart Boards, provide teachers with a large electronic screen from which they can make presentations, explain and practice hard-to-grasp concepts, save notes from the board in digital format and do a host of other meaningful tasks using web-based applications or curriculum content. The boards, which are appearing in increasing numbers of classrooms throughout Westchester County and the U.S. because they engage students so effectively, come with a wide range of tools that allow teachers and students to write and interact with the subject matter on the screen.

Research shows this innovative technology can benefit all types of learners since they can address a number of different learning styles. Research also shows that interactive white boards increase access for younger students and students with disabilities. Using this technology in PHS will enable teachers and staff to modify and adapt content to an individual student's learning styles and needs.

Update Network Infrastructure:

To remove any potential network traffic bottlenecks, the committee has recommended, and the Board of Education has implemented, upgrades to the network infrastructure so that PHS can accommodate anticipated new technology.

SPECIFIC RECOMMENDATIONS

1. Establish an ongoing staff development program for educational technology
2. Encourage staff to attend additional workshops and conferences on integrating technology in their classrooms.
3. Provide ample funding for the purchase of software for classroom use
4. Investigate the feasibility of loaning computers to students who are economically disadvantaged
5. Create a contingency fund for software and hardware purchases
6. Make the Technology Committee a standing committee
7. Replace and update the District's Financial Software
8. Implement a middle school grade reporting system
9. Implement a curriculum mapping software
10. Replace and Implement the District's Student Management System
11. Consider the replacement of classroom computer workstations operating the interactive white boards with laptops
12. Provide funding in the school budget to provide for hardware replacement, professional development, software, and maintenance of the district's technology infrastructure
13. Continue to introduce instructional technologies to new and existing staff
14. Install additional new and replacement classroom computers to continue to ensure that no computer is greater than four years old, or as on an as needed basis.

IN CONCLUSION

Pocantico Hills was a district that desperately needed to upgrade its technology. This plan is an important element in the continuation of the technology implementation plan initiated in 2005-2006 school year. In order to give our students the greatest educational advantages technology can provide it is essential that the Technology Committee continue as a standing committee. The Committee's goal will continue to include a review process to evaluate the recommendations put in place from this plan to ensure they are truly helping students learn the skills they'll need to meet the challenges of the future. The District began the technology implementation in 2005-2006, and funds were included in the 2006-2007, 2007-2008 and 2008-2009 school budgets to continue to address the recommendations of the technology committee.

Technology Plan Budget Information
Erate Funding Year -

District/ School Name:	Pocantico Hills Central School District
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Provide the budget number for the following resources for the 2008-2009 school year based on your technology plan, current district budgets, and your estimation of additional expected costs you will have relative to new technology initiatives planned for 2008-2009

Total Budgeted Amount	\$618,575.00
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Optional Worksheet to assist in determining the total budgeted amount

Category	Estimated Budget	Examples Include but are not limited to
Hardware	\$187,576.00	computers, printers, fax machines, video equipment, scanners, CD-ROM drives, and servers
Professional Development	\$22,334.00	Ongoing technology-related training for technical staff, teachers and / or librarians
Software	\$42,903.00	end-user applications
Retrofitting		electrical wiring, asbestos removal, building modifications, renovations and repairs
Maintenance	\$225,985.00	systems maintenance and operations costs for ineligible hardware and software as well as salaries or technical staff
Other Supplies	\$25,150.00	

Total:	\$503,948.00
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