

Norwell Public Schools
Technology Plan
2006-2007 through 2011-2012

Summary

The Norwell Public School district's Instructional Technology Plan for 2006-2012 represents an examination of our past accomplishments and a vision for moving the district forward with respect to technology integration at all levels. Given this tremendous physical capacity and the high level of technology literacy of our faculty and staff, we are in a position to leverage the incredible power of technology to provide our students with the knowledge and skills they will need to lead fulfilling and productive lives in the 21st century.

Our district's mission statement recognizes the need to provide our students with an education that prepares them to engage in a global society. Our past performance demonstrates our commitment to this mission. During the past several years, we have experienced more than ten-fold increase in computer hardware and our state-of-the-art facilities now enable us to provide truly 21st Century Educational Opportunities for Our 21st Century Students.

Now that we have some of the hardware and infrastructure in place, our next steps focus on making sure that all students and staff have the tools and training they need to make use of our district technology. To this end, we are committed to providing new technology and technology-based professional development for our staff, so that they in turn will deliver technology rich lessons for students. Moreover, we look forward to updating and replacing hardware and the infrastructure so that our goal of preparing students to engage in a global society becomes a reality.

Our goals focus on revisiting our past accomplishments and moving our district forward so that technology becomes a regular tool interwoven throughout our curriculum. Attached is the plan which outlines specific goals and activities to move our district forward as we look toward 2012 and beyond.

**Norwell Public Schools
District Technology Plan
School Year 2006-07 through 2010-2012**

Background

The Town of Norwell made a community-defining commitment to education in general and technology in particular through \$54 million NORWELL 2001 projects. However, during the past several years, we have continued to experience an increase in computer hardware and our state-of-the-art facilities now enable us to provide truly 21st Century Educational Opportunities for Our 21st Century Students. Given this tremendous physical capacity and the high level of technology literacy of our faculty and staff, we are in a position to leverage the incredible power of technology to provide our students with the knowledge and skills they will need to lead fulfilling and productive lives in the 21st century.

Mission Statement for Norwell Public Schools

The mission of Norwell Public Schools, in partnership with the entire community, is to provide excellence in education in a challenging and supportive environment resulting in well-rounded, self-reliant, responsible citizens who are prepared to engage in a global society.

Norwell 20/20 Strategic Plan Strategy 6: Technology – We will identify relevant, emerging, and cost-effective applications of technology and integrate them into the operations and curriculum of the schools.

Synopsis of Technology Goals for 2006-2007 through 2011-2012:

- Provide teachers with the training they need to help students meet the benchmarks outlined in the technology scope and sequence.
- Continue to identify, develop, and provide opportunities for teachers to incorporate twenty-first century instructional and assistive technology as a tool for delivering curriculum.
- Reconvene technology committees to develop a plan of sustainable technology integration in teaching and learning.
- Continue to provide teachers with current computer workstations in each classroom and access to peripherals.
- Implement a professional development program to advance the skills of all staff members.
- Establish a process to evaluate the use of technology in the Norwell Public Schools and realign the district technology goals and practices to meet the benchmarks.
- Nurture new and successful models of technology integration.
- Develop a budget plan to replace aging computers and to purchase the peripherals and software needed to support the implementation of the district's technology goals.

- Consistently re-administer the TSAT or similar survey to measure staff progress in relation to professional development.
- Create and sustain a Technology Action Team that will provide a vision for classrooms of the future.
- Continue to upgrade student workstations with new computers and peripherals.
- Use X2 to generate data for regular EPIMS submissions.
- Create a database of students' standardized testing results.
- Create and maintain a database to track licensure dates and professional development activities completed by faculty.
- Utilize online facility scheduling and migrate to web-based application that enable employees to access and complete administrative forms.
- Investigate the feasibility of digital student portfolios for the purpose of allowing students to demonstrate mastery of the curriculum and expectations of student learning.
- Utilize the Department of Elementary and Secondary Education's Data Warehouse to access and analyze student assessment data and use this data to inform instruction.
- Develop a data warehouse of curriculum units, lesson plans, teaching strategies, areas of teacher expertise, and teaching tools for use by district employees.
- Expand network capabilities to include wireless options, remote access, and improved backbone for enhanced access to and control of network use while ensuring security.

Highlights of the Plan

Norwell Public Schools has committed significant resources toward ensuring that all students are provided with a 21st Century education. Through funding from the NORWELL 2001 project and through a special article from our 2007 Town Meeting, technology has been brought to the district, both in terms of resources and integration.

During the 2004-2005 school year, the district convened the Technology Planning Team to develop a scope and sequence for K-12 students. The team reviewed all technology skills and concepts, then developed a scope and sequence chart that outlined where in the curriculum students would be introduced to concepts. A complete copy of the scope and sequence is attached and is also posted on our website (www.norwellschools.org). In addition, teachers, administrators, students, parents, and others may access the information on our district website.

Once the scope and sequence had been established, it was necessary for the district to assess teachers' ability to deliver the skills outlined in the document, and to provide the training necessary to ensure that all teachers had the proficiency in these skill areas. To begin, all teachers were asked to take the TSAT as a means of measuring proficiency in technology. Using the results of the TSAT, our Technology Integration Specialist worked to develop a series of workshops that would address teachers' specific needs.

For the 2005-2006 school year, Norwell Public Schools dedicated its district-wide professional development program to technology. Using a train-the-trainer model, all teachers will engage in technology training at one of three levels: beginner, intermediate, and advanced. In this way, the trainers will provide professional development at appropriate levels for all teachers.

During 2005-2006, the following district-wide professional development took place:

Date	Workshop Offered
September 2005	Full day of PowerPoint (beginner, intermediate, advanced)
September 2005	Full day of Excel (beginner, intermediate, advanced)
October 2005	Full day of MS Word (beginner, intermediate, advanced)
October 2005	Half-day of software training specific to content area/grade level
December 2005	Half-day of software training specific to content area/grade level
March 2006	Half-day of specific software training specific to content area/grade level
May 2006	Half-day of software training specific to content area/grade level

During the 2007-2008 school year, technology training included setting up new teacher web pages. Training on various software programs was also offered to staff. In addition to the district-wide professional development, staff in the district were also introduced to X2, our new student information system. Several staff members have been trained in X2 and now serve as trainers for the district. The X2 system houses all of our student information, and has become the means for grading and attendance in the system. Trainers will continue to work with their colleagues to ensure that all staff members use the system on a regular basis. Throughout the 2008-2009 school year, we invested the use of X2 for storage of other data such as student assessment information and teacher licensure information. Currently, X2 stores all licensure and degree information for staff members, and we have begun the process of using X2 to generate and store yearly goals as well individual professional development plans.

The 2008-09 brought 32 interactive whiteboards and over 50 laptop computers with docking stations to classrooms across the district. We also hosted two graduate courses on integrating technology into the classroom as well as multiple summer and after school workshops for staff. With this influx of new technology, we will continue to provide teachers with training sessions through our lead technology teachers and outside consultants.

During 2008-2009, the following technology professional development took place:

Date	Workshop Offered
July 7, 2008	2 ½ hour SMART Board workshop
July 21, 2008	6 hour training
August 4, 2008	6 hour training
September 10, 2008	2 hour SMART Board workshop
September 17, 2008	2 hour SMART Board workshop
October 2, 2008	Full-day Middle School training/sharing
October 3, 2008	Full-day Elementary Schools training/sharing
October 30, 2008	2 hour SMART Board workshop
February 26, 2009	4 hour Fundamentals Workshop
Spring, 2009	Graduate Course – “Teaching and Learning with Technology”
April 16, 2009	Full-day middle/high school training/sharing
May 22, 2009	Full-day elementary schools training/sharing

Technology Team

Norwell Public Schools makes use of several technology committees formed as a result of our strategic plan. The teams meet at regular intervals to assess current status of technology and plan for future steps and training. The teams are comprised of staff from all levels and disciplines as well as building and district administrators.

Evaluation

Members of the technology team meet to examine and discuss the STaR Chart and technology surveys as they relate to district progress. In addition, evaluation forms are distributed and collected at the end of each professional development session. Finally, members of the technology department meet regularly to assess progress related to implementation.

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Technology Plan 2006-2007 through 2011-2012

Budget Overview

Norwell Public Schools is committed to providing both technology training and integration and the infrastructure to support both of these items. To that end, Norwell Public Schools' technology budget supports the following:

- Resources for staffing, training, hardware, software, internet services, consultants, etc.
- E-Rate for eligible items

More specifically, the budget supports the following:

Integration and Professional Development

The district has allocated funds to support an **Assistant Principal for Instructional Technology and Curriculum**. This administrator travels throughout our elementary schools and helps teachers implement lesson plans that incorporate elements of technology. In addition, she trains teachers in the uses of software and various applications. Norwell Public Schools also sustains a team of **Lead Technology Teachers** (one per building) who assist with various aspects of technology integration and training. Based upon feedback from teachers and a commitment to make technology part of everyday teaching as opposed to lessons that exist in isolation, we have had this position in place for a number of years and continue to include this line in our budget.

Lead Technology Teachers assist teachers in their buildings on a smaller scale. In addition, we often use a train-the-trainer model to deliver technology-related professional development. In these cases, **stipends** for trainers are provided.

Not all technology-related professional development can occur in the district. As a result, part of our budget is earmarked for outside technology **workshops and training**.

Classroom Computers and Computer Labs

With full labs at every school and computers, scanners, and printers in every class – over 1,100 computers in a district of 2,300 students – part of our budget supports the maintenance of the machines in our schools.

Our full-time network administrator and support specialist, along with IT consultants, support all of the technology in the district. The Director of Teaching, Learning, and Technology provides support to these personnel. These employees ensure that the LAN/WAN is functioning, so as to provide connectivity at all times.

Hardware, Software, Supplies, and Maintenance

The district is constantly striving to provide materials necessary to integrate technology in lessons on a daily basis. To that end, our budget supports the purchase of necessary hardware, software, and supplies. Based upon the technology committee's recommendation, purchases for instructional software and related materials come from our technology budget. In addition, the budget also provides for teachers to have accounts that allow them to create websites for curriculum and homework posting. Finally, hardware purchases also come from the technology budget.

Internet and Email access - along with the support necessary (i.e. filters for safety) to maintain these services - accounts for a portion of the budget. Students and staff have access to the internet in classrooms and labs, as well as in libraries. This internet access is available to us through an internet provider that uses only CIPA compliant tools. We also utilize email archiving services.

Web Services

Our district hosts a website to which parent organizations, individual schools, and teachers post information, lesson plans, and curriculum material. Our web support specialist assists with the maintenance of the website. In addition, she is responsible for maintaining email accounts, assisting teachers with posting items to the web, and for aiding library personnel in the use of software.

E-Rate Services

Norwell Public Schools uses E-rate to the greatest extent possible. Student email accounts, internet service for the district, and phone services are the major items for which we use E-rate. We follow all required E-rate guidelines and file appropriate documents that require a 470 form.

To ensure that we are making the most of our budget and able to secure what we need to deliver technology to our staff and students, we have implemented a strategic approach:

Strategic Planning

During the 2007-2008 academic year, two technology-related teams were put into place. The first, Norwell 20/20's Technology Action Team, met regularly to create a vision for the district that will take us into 2020 and beyond. The second team, the Technology Replacement Committee, is a group of school and community members brought together to examine the existing hardware and infrastructure within the district. Their work provides recommendations and a framework for replacing technology on a five-year cycle. This year, we are revising the strategic plan and will update our technology goals and cycle.

Going forward with our strategic plan, identified administrators have taken responsibility for the action plans and will oversee these steps for the next five years.

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Synopsis of Technology Goals for 2006-2007 through 2011-2012

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- Continue to upgrade student computer labs with new computers and peripherals.
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- Create a database of students' standardized testing results.
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**Norwell Public Schools
 Technology Goals for 2006-2007 through 2011-2012**

Timeline for Implementation

Goal	Persons Responsible	Timeline for Completion	Major Action Steps
Provide teachers with the training they need to help students meet the benchmarks outlined in the scope and sequence.	Director of Teaching, Learning, and Technology	On-going from 2006-2012 and beyond	<ul style="list-style-type: none"> ○ Establish train the trainer model for PD. ○ Devote time for technology training. ○ Identify teachers in each building who can serve as informal contacts for technology-related questions. ○ Continue to identify, develop, and provide opportunities for teachers to incorporate twenty-first century instructional and assistive technology as a tool for delivering curriculum. ○ Continue to increase awareness as to internet safety and cyber-bullying.
Continue to utilize tech committees to evaluate the extent of technology integration and develop a plan of sustainable technology integration in teaching and learning.	Technology Committees, Director of TLT	Spring 2007 and On-going	<ul style="list-style-type: none"> ○ Establish meeting schedule and recruit new members as necessary. ○ Revisit prior work and create action plan for upcoming years. ○ Provide appropriate and relevant professional development opportunities for all staff.
Implement a professional development program that will advance the skills of all staff members.	Director of TLT; Lead Technology Teachers; building	On-going	<ul style="list-style-type: none"> ○ Meet regularly to assess teacher needs and develop workshop and course offerings.

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Goal	Persons Responsible	Timeline for Completion	Major Action Steps
	administrators		
Establish a process to evaluate the use of technology in the Norwell Public Schools and realign the district technology goals and practices to meet the benchmarks.	Director of TLT; technology team	On-going	<ul style="list-style-type: none"> ○ Hold regular meetings to re-examine goals and evaluate progress toward reaching those goals. ○ Develop tool to assess technology integration.
Nurture new and successful models of technology integration.	Director of TLT; technology committees; building administrators	2006-2012	<ul style="list-style-type: none"> ○ Examine new software possibilities for classroom use. ○ Attend professional conferences to network and identify new technologies for classroom use. ○ Provide teachers with access to professional conferences.
Re-administer the TSAT or similar survey to measure staff progress in relation to professional development.	Director of TLT, technology team	2006- 2012 and beyond	<ul style="list-style-type: none"> ○ Require all teachers to re-visit the TSAT or similar survey each year beginning in 2007. ○ Analyze results and plan future professional development accordingly.
Re-establish five-year plan of replacement of existing hardware and investigate staff options for sustainability.	Superintendent, Director of TLT, committee members	2009-2012	<ul style="list-style-type: none"> ○ Reconvene committee and hold regular meetings. ○ Complete a technology inventory. ○ Develop a five-year replacement plan with appropriate staffing and cost analysis.
Continue to provide teachers with current computer workstations in each classroom and access to peripherals.	Director of TLT; tech staff	2008-2012	<ul style="list-style-type: none"> ○ Provide teachers with consistent access to scanners, printers, and other peripheral equipment. ○ Sustain infusion of SMART Board technology ○ Continue to purchase and distribute laptop

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Goal	Persons Responsible	Timeline for Completion	Major Action Steps
			computers and docking stations for classroom teachers
Continue to upgrade student workstations with new computers and peripherals.	Director of TLT; tech department	2007-2012 and beyond	<ul style="list-style-type: none"> ○ Continue to inventory existing hardware ○ Create timeline for replacement ○ Research cost of replacement ○ Implement plan according to schedule
Use X2 to generate data for regular EPIMS submissions.	Director of TLT; Assistant Principal	2007-2012 and beyond	<ul style="list-style-type: none"> ○ Populate X2 database with necessary EPIMS information ○ Devise a schedule for regular maintenance of data ○ Create a process for inputting data as employees enter and exit the district. ○ Train support staff to enter data and submit data to DOE.
Utilize X2 for additional functions for both administrator and teacher use.	Director of TLT; building administrators	2008-2012	<ul style="list-style-type: none"> ○ Create a database of students' standardized testing results. ○ Create and maintain a database to track licensure dates and professional development activities completed by faculty. ○ Train administrators and staff on new modules as needed.
Utilize online applications for administrative use.	Director of Finance & Operations; Director of TLT, network specialist	2008-2012	<ul style="list-style-type: none"> ○ Utilize online facility scheduling and reporting of technology issues ○ Enable employees with access to online administrative forms
Investigate the feasibility of	Director of	2009-2012	<ul style="list-style-type: none"> ○ Research existing ways to implement

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Goal	Persons Responsible	Timeline for Completion	Major Action Steps
digital student portfolios.	TLT; tech committee		student portfolios <ul style="list-style-type: none"> ○ Research and provide necessary infrastructure and software to maintain portfolios. ○ Provide training for students and staff in use of digital portfolios.
Utilize DESE's Data Warehouse for assessment data and analysis	Director of TLT, building administrators, data teams	2009-2012 and beyond	<ul style="list-style-type: none"> ○ Provide administrator training in use of Data Warehouse ○ Form data teams across the district ○ Decide which assessment data to house in Data Warehouse ○ Develop plan to analyze data ○ Implement analysis to inform instruction
Expand network capabilities to include wireless options and remote access.	Director of TLT, network specialist and consultant, tech committee	2008- 2012	<ul style="list-style-type: none"> ○ Investigate feasibility and cost of wireless access in all buildings ○ Investigate feasibility and cost of remote access ○ Develop plan for implementation and training
Develop warehouse of curriculum units, lesson plans, and strategies	Director of TLT; tech committees, building administrators	2008-2012	<ul style="list-style-type: none"> ○ Require teachers to develop technology-enhanced lesson plans. ○ Post plans to district website. ○ Train teachers on how to navigate the website to access lessons. ○ Update website on regular basis to ensure most current plans are on file. ○ Provide training on SMART Board notebook software. ○ Encourage and provide time for lesson sharing.

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