

# **Newburyport Public Schools District Technology Plan 2008-2011**

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## Introduction

The primary goal of Massachusetts Education Reform and of the Massachusetts Board of Education is to raise student academic achievement by creating conditions that promote effective schools and accountability for results. In keeping with this goal and those of the Enhancing Education through Technology Act of 2001 under the No Child Left Behind legislation, Massachusetts provides leadership to schools in using appropriate technology to improve student learning.

Technology has the power to engage and challenge students. Applications such as formative assessment tools can help teachers ensure that students are meeting the standards. By allowing teachers to access information about student learning, information systems make it possible for teachers to support individual students better. Online learning programs can increase the range of learning opportunities available to students, enabling them to study with experts and other students around the globe. Technology can also play a role in ensuring students' safety, by facilitating communication among school personnel and parents.

The Massachusetts Department of Education provides a number of resources, programs and tools to improve student academic achievement and help students acquire technology literacy, as well as to support teachers and administrators in integrating technology into the curriculum. Newburyport Public Schools has adopted the use of many of these tools in guiding technology planning and delivery of services.

This technology plan was developed according to the guidelines provided by the Massachusetts Department of Education. These guidelines are based on the School Technology and Readiness (STaR) Chart developed by the state's Educational Technology Advisory Council (ETAC) and are recommended benchmarks for districts to meet by the end of the school year 2010- 2011. They are available on the department's web site at <http://www.doe.mass.edu/edtech/planning.html>

## **Review of Newburyport Public Schools Progress to meet State Benchmarks for 2007.**

The Newburyport Public School district worked to progress toward the goals identified for technology in the State's Local Technology Plan Guidelines for 2007. During the last technology plan cycle we continued to provide a variety of professional development offerings, both job-embedded and outside of the school day which offered opportunities for staff to meet their professional development goals and provided in-service credit, graduate credit and PDP's. Newburyport's Student Information database system was approved as a vendor by the MA Department of Education. Use of electronic communication increased in all of the district's schools. Web sites for each school were updated and improved. Goals relating to the integration of technology have been incorporated in the District Improvement Plan and in the Individual School Improvement Plans.

The Newburyport District Improvement Plan includes goals to fully implement the school system's model of technology integration for curriculum and instruction in all schools. Specific goals identified in our District Strategic Plan that were met during this cycle include:

- Improving the design of the instructional setting to support flexible scheduling of labs, and media centers, and use by students for cooperative projects in their own classroom.
- Increasing the number of teachers who use technology for research, lesson planning, multimedia and graphical presentations and simulations, and share technology uses with colleagues.
- Providing a variety of professional development opportunities in technology that directly tie technology to its use in content areas and address how to effectively manage it in the classroom.
- Coordinating training opportunities with Professional Development Council and continue to provide a variety of training which includes workshops, graduate courses, and professional development sessions in addition to job embedded training which address identified needs.
- Providing all teachers with access to a fully functioning, internet connected, A/B type computer in their classroom.
- Equalizing student to computer ratios at all levels, meeting the 5:1 ratio in each school.
- Evaluating the level of technical support provided for each school in the District and making adjustments to meet the needs of individual schools.

During the previous technology plan cycle, Newburyport moved to meet the goals identified in our district technology plan through increases in technical support staff, increases in access, the adoption of Massachusetts Recommended Instructional Technology Standards, increased district sponsored professional

development in technology, completion of high school renovation project, continued development of programs to increase the use of technology for curriculum and instruction and continued leveraging of state and federal government, and privately sponsored resources.

Newburyport's long-term strategies for improving academic achievement and technology literacy for all students and for improving the capacity of all teachers to integrate technology effectively into curricula and instruction continue to be focused on five areas: Staff Development, Curriculum and Instruction, Assessment and Reporting, Equipment and Facilities, and Technical Support.

## Vision

The teachers and administrators of the Newburyport Public Schools are committed to a future in which high standards and expectations are set for all students. To that end, we embed technologies throughout the system to improve student learning and system efficiency.

Information and communication technologies are essential tools for the process of constantly improving our curriculum, instructional and assessment methods. Through the effective integration of technology, our schools will be able to

- Provide learning experiences which are active, personalized and involve team work;
- Involve students higher level thinking skills;
- Focus students on solving real life problems;
- Increase student interaction with people from other parts of the world;
- Approach learning in ways that use information technology ethically and appropriately.

The Newburyport School System believes the classroom of the 21st Century will be a place where technology is integrated into all aspects of curriculum, instruction, and assessment. Additionally, the vision embraces administrative tasks which will be managed electronically so the school community can access appropriate student and school information online.

The Newburyport School System also commits to providing student access to well prepared teaching professionals and schools equipped with appropriate instructional resources in every learning environment. As our students move through their school experiences, they will have the training and background necessary to become skilled, productive members of a global workforce.

To support this vision, staff development training in technology will be systemic, on going, and supported by modeling and peer coaching.

The community, staff, parents, institutions of higher learning, and businesses will work together as partners in the process of teaching our students and staff. District stakeholders will understand, support, and appreciate the role of technology in educational settings.

To integrate technology into every subject area across the curriculum and throughout every grade level and to manage school data electronically, requires that district personnel be open to the expanding possibilities of technology and be prepared to adapt to the changes and uncertainties that lie before us.

## Needs Assessment

The district assesses the technology products and services that will be needed to improve teaching and learning by maintaining a set of goals for accessibility to technology for each school. This is reviewed annually as part of the budget process. Instructional technology to support the curriculum will be identified as our curriculum mapping progresses. It is also identified during annual MCAS result reviews. Requirements can be defined by the users, products and services can be identified by the technology team or the users, and pilot testing will be done by the users.

## Acceptable Use Policy

The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy will be updated during this technology plan cycle to help ensure safe and ethical use of resources by teachers and students, and will include email use policies for staff.

## Budget

The district has a budget to support the technology plan with line items for technology in its operational budget. The budget includes staffing, infrastructure, hardware, software, professional development, support, and contracted services (including telephone services). Newburyport pays for the non-discounted portion of their costs for the services procured through E-rate through the local budget. The annual budget information is available through the annual online reporting system.

Newburyport will continue to seek and make use of federal and state resources that we are eligible to receive. The district has been very fortunate to have the support of private local organizations whose resources have been

responsible for much of the progress the district has made in reaching its technology goals.

## Evaluation

The evaluation of the effectiveness of technology resources toward attainment of educational goals occurs on a regular basis, both monthly and annually.

The evaluation process includes monthly meetings of the technology team, and coordination with the Curriculum Advisory Board and the Professional Development Council. The technology team and school principals meet to discuss and review annual action plans for the district. The data collection and assessment done to update our technology plan online each year enables us to monitor our progress in achieving the goals of our technology plan and to make mid-course corrections in response to new developments and opportunities that may arise.

## Technology Integration and Literacy

**Integration:** Currently more than 85% of the teachers use technology every day for tasks such as lesson planning, administrative tasks, communications and collaboration; and with students every day to improve student learning. The goals for this plan are:

1. to maintain or increase this percentage;
2. to increase the frequency daily;
3. to ensure that new teachers are provided with the support needed to meet this goal;
4. and to increase the types of activities and tasks for which technology is used.

**Literacy:** Our technology literacy goal for students is to have an assessment in place that will indicate the percentage of eighth grade students that show proficiency in all the Massachusetts Recommended PreK-12 Instructional Technology Standards for grade 8. The goal for teachers is to establish a consistent assessment process through use of the TSAT annually at all schools.

**Staffing:** The goal for staffing is to increase the number of instructional technology teachers to a 1:75 ratio to instructional staff.

## Technology Professional Development Goals

1. At least 85% of district staff will have participated in 45 hours of high-quality professional development that includes technology skills and the integration of technology into instruction.
2. Technology professional development will be sustained and ongoing and include coaching, modeling best practices, district-based mentoring, study groups, and online professional development. The professional development will include concepts of universal design and scientifically-based research models.
3. Professional development planning will include an assessment of district and teachers' needs. The assessment will be based on the competencies listed in the Massachusetts Technology Self-Assessment Tool.
4. Administrators and teachers will consider their own needs for technology professional development, using the technology self-assessment tools provided by the Massachusetts Department of Education or similar tools.

## Accessibility of Technology

### Hardware Access

1. The district will maintain or decrease its average ratio of fewer than five students per high-capacity, Internet-connected computer. The definition of a high-capacity computer is a computer that has at least 256 RAM and either a Pentium 4 processor or a Macintosh G4 processor (or equivalent). These are referred to as Type A computers.
2. The district will provide students with access to portable and/or handheld electronic devices for appropriate grade level instructional activities to meet curriculum goals.
3. The district will maximize access to the general education curriculum for all students, including students with disabilities, using technology in classrooms with universal design principles and assistive technology devices.
4. The district will provide access to digital projectors and electronic whiteboards for all classrooms.
5. The district will implement a computer replacement cycle of five years.

## Internet Access

1. The district will maintain connectivity to the Internet in all classrooms in all schools including wireless connectivity, where needed.
2. The district will continue to provide bandwidth of at least 10/100/1 Gb to each classroom. At peak, the bandwidth at each computer will be at least 100 kbps. The network card for each computer will be at least 10/100/1 Gb.

## Networking (LAN/WAN)

1. The district will continue to provide a minimum 100 Mb Cat 5 switched network and/or 802.11b/g/n wireless network.
2. The district will continue to provide access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.

## Access to the Internet Outside the School Day

1. The district will continue to work with community groups to ensure that students and staff have access to the Internet outside of the school day and include an up-to-date list of places where students and staff can access the Internet after school hours on the district web site.

## Staffing

1. The district will continue to provide a network manager.
2. The district will provide timely in-classroom technical support with clear information about how to access the support, so that technical problems will not cause major disruptions to curriculum delivery.
3. The district will continue to provide at least one FTE person to support every 200 computers.

## E-Learning and Communications

1. The development and use of innovative strategies for delivering specialized courses through the use of technology will be encouraged.
2. Access to web-based and/or interactive video learning on the local, state, regional, national, and international level through IP-based connections will be maintained and their use encouraged.
3. Classroom applications of e-learning including courses, cultural projects, virtual field trips, etc.

4. The district will continue to maintain an up-to-date web site that includes information for parents and community members.
5. The district will comply with federal and state law, and local policies for archiving electronic communications produced by its staff and students. Staff and students will be informed that any information distributed over the district or school network may be a public record.

## Technology Assumptions

The following conditions are essential for the success of the District's Technology Plan:

1. All students and staff have access to a minimum standard level of technology. Computer hardware, software, peripherals, audio/visual equipment, and other supplies must be conveniently available throughout the district.
2. Instructional technology becomes an integral part of curriculum and is a tool for assisted learning for all students.
3. Technological literacy becomes a fundamental expectation for students.
4. All staff becomes technologically literate.
5. Coordination exists between hardware purchases and the personnel to support them.

## Conclusions and Recommendations

The following recommendations are made to ensure that the district technology assets are effectively utilized to meet the goals as identified.

1. District meets the requirements for providing resources as specified in the Replacement Plans for the individual schools.
2. The competencies identified for students and staff become clear expectations to be achieved by these groups.
3. Budgets for the Fiscal Years 2008, 2009, 2010 and 2011 are sufficient to fund the purchase, support and maintenance of hardware and software related to the goals and objectives of this plan.
4. Consistent and ongoing staff development in the instructional use of technology be implemented.
5. Qualified technicians are sufficient in number to meet the needs of the district.