Blanchard Memorial Elementary School

Three-Year Technology Plan

FY 2011 –FY 2013

Dr. Curtis Bates, Superintendent/Principal/Curriculum Director

Submitted: January 2011

Prepared by:
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Mission Statement

Students and staff at Blanchard Memorial School will have access to the technological resources necessary to support the Massachusetts Technology Literacy and Information Fluency Standards and Benchmarks. Current and emerging technologies will be integrated so as to enhance learning and productivity of all members of the school community.

Vision Statement

We believe technology must play an important role in helping shape the education of all Blanchard Memorial School students. Through appropriate use and modeling of technology within the school setting, and seamless integration of technology with the school curriculum, we encourage students to be life-long, inquiry-based learners. Access to and mastery of evolving technologies will enable educators to practice quality instruction, and will allow students with a variety of learning styles to develop the 21st Century skills they need to succeed in future vocations and/or college experiences.

Blanchard Memorial School Technology Report School Year 2010-2011

Prepared by Peggy Harvey, Instructional Technology Specialist
January 21, 2011

This school year commenced with considerable changes to the school technology program. The technology department at Blanchard Memorial School was reorganized, and new staff hired for the school year. Two positions, Technology Director, and part-time Data Management Specialist, were eliminated. Matt Frost was hired as the IT Technician, a position shared 50/50 with the town of Boxborough, and Peggy Harvey was hired as the Instructional Technology Specialist. The newly organized technology department continues to be guided by the Blanchard Memorial School Improvement Plan, with the shared goals of developing a protocol and working toward implementing a RtI (Response to Intervention) instructional model, and continuing to improve instruction and communication through the use of technology.

In addition to personnel changes, there were several significant technology upgrades at the start of the school year. With the installation of new wireless access points throughout the school building, wireless Internet is now available in all locations except the gymnasium. A classroom was converted to a new computer lab, equipped with a teacher workstation, ceiling-mounted projector, a Polyvision Eno interactive whiteboard, and 25 Toshiba netbook computers. Two existing mobile laptop carts (Computers on Wheels, aka COWs), each with 20 IBM laptop computers, were updated for improved reliability and wireless printing and Internet access. The computer lab and COWs represent three fully-equipped computer classrooms, providing greater access to technology for students at Blanchard Memorial School

Donated computer equipment and the purchase of 39 Toshiba laptops allowed for technology upgrades and improved access for teachers and students in individual classrooms. Most Blanchard teachers now have laptop computers, and classrooms in first, second, and third grade each have 3 new Toshiba laptops for student use. Upgrades to student computers in grades 4, 5, and 6, made possible by the donation of desktop computers, are ongoing.

During the summer four Eno interactive whiteboards were installed: one in the new computer lab, one in a grade 4 classroom, and two in CASE classrooms. Several SMARTBoard interactive whiteboards, which were replaced by Eno boards during the previous school year, have been installed in other classrooms, including all three Kindergarten classrooms. All classrooms in grades K, 4, 5, and 6 now have interactive whiteboards, and plans are in place to equip additional classrooms with projectors and interactive whiteboards, either wall mounted or on a portable stand. To maximize the full capabilities of the Eno and SMARTBoards, projectors were ceiling-mounted in most classrooms, a considerable but worthwhile expense.

Despite the recent upgrades, a majority of the computers at Blanchard are at least five years old. Many computers used by students and staff will need to be replaced within the next two

years, including the laptops on the two COWs. As recommended by the DOE Local Technology Plan Guidelines for school years 2011-2015, school districts in Massachusetts should strive for an average ratio of one high-capacity, Internet-connected computer for each student by 2014-2015, and have an established computer replacement cycle of five years or less. In addition, the Massachusetts School Technology and Readiness Chart (STaR) suggests a total technology budget allocation of $300-$425 per student to achieve a level of "Proficient Technology."

In support of the goal to continually improve home-to-school communications, the school implemented PowerSchool, a web-based student information system that provides improved data management, reporting, and home/school collaboration. In addition, the technology department launched an entirely new website for the Boxborough Public School District, with updated content and improved organization and navigational tools.

Instructional Technology initiatives during the school year have included a combination of co-planning, co-teaching, in-class support, one-on-one staff tutoring, and technology workshops held before and after school, with topics based on teacher input. Educational technology resources are also available to staff and students through a variety of resources developed and maintained by Peggy Harvey, including the school website, blogs, wikis, and grade-specific web-based bookmarking sites.

Massachusetts State Technology Benchmarks

Blanchard Memorial School is committed to following the guidelines developed by the state's Educational Technology Advisory Council (ETAC). The goal is to meet these recommended benchmarks by the end of the school year 2014- 2015.

Mass DESE Recommended Benchmarks	Blanchard Memorial School Status
Benchmark 1 **Commitment to a Clear Vision and Implementation Strategies**	• Technology plan includes reasonable goals in alignment with school improvement plan.: http://www.boxboroughschool.org/sites/default/files/SCHOOL%20IMPROVEMENT%20PLAN%201011%20FINAL.pdf • Need to meet with technology advisory council and develop a Technology Team, including representatives from school committee, administration, and teaching staff. • In order to better assess technology needs, BMS needs to adapt and implement DESE Instructional Technology Materials Evaluation Form for Blanchard community (http://www.doe.mass.edu/edtech/standards/tech_mat.doc) • Tech plan needs to include assessment of services and products • BMS has a CIPA-compliant AUP: http://www.boxboroughschool.org/sites/default/files/Student%20Acceptable%20Use%201011%20FINAL.pdf • The Boxborough School District has a line item in its operating budget for technology • The budget includes staffing, infrastructure, hardware, software, professional development, support and contracted services. • The district leverages alternative funding through federal E-rate reimbursement and PFT grants, when applicable • The BMS technology department evaluates the effectiveness of technology resources on a regular basis. • The Tech plan needs to include an evaluation process to monitor progress in achieving goals
Benchmark 2 Technology Integration and Literacy	• Results of a recent survey show that at least 85% of BMS teachers and administration staff use technology every day. • Instructional Technology initiatives are underdevelopment to work toward at least 85% of teachers using technology appropriately with students every day to improve student learning of curriculum, based on Mass Recommended K-12 Instructional Technology Standards: http://www.doe.mass.edu/edtech/standards/itstand.pdf • Instructional Technology initiatives are in place to guide BMS K-6 students toward DESE goal of Instructional Technology proficiencies by grade 8; need to develop cohesive technology curriculum to ensure equitable technology instruction for all students. • Need to develop plan to achieve goal of 100% of teachers working to

	meet proficiency level in technology, as defined by the Massachusetts Technology Self-Assessment Tool (TSAT): http://www.doe.mass.edu/edtech/standards/sa_tool.html • Boxborough Public School District does not currently have district-level technology director/coordinator. The position was cut from the budget in 2010. • The district provides a full-time instructional technology teacher for Blanchard Memorial School. • Beginning September 2010, the school and staff members use PowerSchool for data management and assessment; DIBELS and GMade are used for student assessment.
Benchmark 3 Technology Professional Development	• Need to develop plan for at least 85% of staff to participate in 45 hours of technology professional development at the end of 3 years. • Instructional technology specialist provides sustained and ongoing technology professional development in the form of coaching, modeling, and "Technology Café" workshops which staff can choose to attend. • Need to investigate options for providing online professional development. • Professional development planning is based on formal and informal assessment of teachers' needs, based on the competencies listed in the MA TSAT. • Need to administer TSAT by end of 2010-2011 school year.
Benchmark 4 Accessibility of Technology	• BMS currently has a ratio of approximately 2.5 students per Internet-connected computer. • The Tech department is working toward a goal of providing 1 high-capacity laptop computer per full-time instructional staff member. • The Tech department will work toward the long-term goal of an average ratio of one high-capacity, Internet-connected computer for each student. • BMS students have access to portable computing devices via 2 COWs, each equipped with 20 laptops, and the computer lab's 25 netbook computers. • COWs, the computer lab, and 12 computers in the BMS library are accessible to all students; assistive technologies are provided as needed. • All teachers can reserve access to COWs and computer lab via First Class online schedules. • Projectors are available to all teachers. Most classrooms now have interactive whiteboards, and all teachers have access to the Eno Interactive whiteboard in the computer lab. • The Tech department is striving for a computer replacement cycle of 5 years, but budget constraints may dictate a longer cycle. • All BMS classrooms and common areas except the gym now have wireless Internet access. • The Boxborough School District provides access to the First Class server, school network servers, and MECnet for secure file sharing, backups, scheduling, email, and web publishing. • The Tech department and BMS librarian need to provide information for students and families about accessing the Internet outside of the school

	day, including adding to the school website a list of places where students and staff can access the Internet. • BMS has a .5 network technician. • The network technician and the instructional technology specialist share responsibility for providing classroom tech support, and support of approx. 240 school computers.
Benchmark 5 Virtual Learning and Communications	• The BMS Tech dept. encourages the use of innovative, technology-based strategies, such as online webinars and videos, for teaching and learning. • The school subscriptions to BrainPop and Discovery Education Streaming provide e-learning opportunities to all students and staff. • The Tech department actively supports and encourages the use of web-based resources for learning and communicating, including VoiceThread, ePals, and other educationally appropriate Web 2.0 technologies. • Grade 1 students have access to classroom subscriptions for Raz-Kids, a web-based early literacy program. • All students have access to Grolier online encyclopedia. • The district maintains an up-to-date website that provides information for students, staff, families, and community members. • The district complies with federal and state law for archiving staff and student email and other critical data.
Benchmark 6 Safety, Security, and Data Retention	• The district has a CIPA-compliant AUP: http://www.boxboroughschool.org/sites/default/files/Student%20Acceptable%20Use%201011%20FINAL.pdf • Students are instructed in appropriate online behavior as part of the school library curriculum. Ongoing education regarding cybersafety and cyberbullying is delivered by librarian, instructional technology specialist, and classroom teachers, and communicated via school website and newsletters. • Email produced by staff are archived for 7 years on school archive server. • Student records are housed in the PowerSchool system accessible only via SSL encrypted username / password

Accessibility of Technology

With an approximate ratio of 2.5 students for each computer, Blanchard Memorial School is within state guidelines for student access to technology. The Technology Department will work with stakeholders to review the capacity of student computers, and develop a feasible replacement plan for outdated computers, working toward the state recommended goal of providing one high-capacity, Internet-connected computer per student by 2014-2015. With that in mind, the Technology Department will investigate opportunities to acquire additional mobile computing labs, while reducing the number of aging desktop computers currently located in individual classrooms. This plan is expected to increase accessibility of new, reliable technology, and provide computers on a one-to-one basis for classroom projects. Ultimately, this plan may reduce the number of computers in the school while achieving improved access for students.

Computer Equipment Plan
Blanchard Memorial School
Prepared by Peggy Harvey, Instructional Technology Specialist and Matt Frost, Network Technician
1/10/2011

Grade / Location	Staff computers	Computers per classroom	Student computers per grade level	Proposed replacement year
Pre-K	1	2	2	2013
K	3	2	6	2013
1	3	3	9	2015
2	3	3	9	2015
3	3	3	9	2015
4	3	4*	12	2012
5	4	4*	16	2012
6	4	4*	16	2012
ELL	1	2	2	2012
Admin & support staff	25*		0	varies
Library	1	12	12	2014
Lab	1	24	24	2016
COW A	0	21	21	2012
COW B	0	21	21	2013
Netbook cart (proposed)	1	24	24	2017

Total	**53**		**183**	

Total computers in school: 236

*Proposed. Current numbers are actually higher.

Blanchard Memorial School Interactive Whiteboards

1/20/2011

Product	Classroom
Polyvision Eno 96”	Computer Lab
SMARTBoard	6-D
Polyvision Eno 96”	6-L
Polyvision Eno 96”	6-Mc
Polyvision Eno 96”	6-Me
Polyvision Eno 96”	5-C
Polyvision Eno 96”	5-N
Polyvision Eno 96”	5-S
Polyvision Eno 96”	5-W
SMARTBoard	4-L
SMARTBoard	4-T
Polyvision Eno 96”	4-G
SMARTBoard small portable	1-H
SMARTBoard	K-K
SMARTBoard	K-H
SMARTBoard portable	K-B
SMARTBoard portable	Library
SMARTBoard	Art
SMARTBoard portable	pending
SMARTBoard portable	pending
SMARTBoard	pending
SMARTBoard	pending

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Massachusetts Technology Literacy Standards

The Boxborough Public School District recognizes our responsibility to continually adapt to an increasingly interconnected society, and to incorporate emerging technologies in order to educate students in the 21st century. In concurrence with state guidelines, Blanchard Memorial School strives to integrate technology skills and literacy with the general curriculum. The Massachusetts DOE approved the most recent technology literacy standards in April 2008. These standards which guide instructional technology at Blanchard Memorial School, outline skills and expectations by grade level, and fall into three broad categories.

Standard 1. Demonstrate proficiency in the use of computers and applications, as well as an understanding of the concepts underlying hardware, software, and connectivity.

This standard includes:

- proficiency in basic productivity tools such as word processing, spreadsheet, database, electronic research, e-mail, and applications for presentations and graphics;
- conceptual understandings of the nature and operation of technology systems; and
- learning and adapting to new and emerging technology tools.

Standard 2. Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school, and in society.

This standard

- relates to social, ethical, and human issues. It promotes positive attitudes toward the uses of technology, as well as responsible use of information. This standard also includes recognition of technology's impact on civic participation, the democratic process, and the environment;
- aims to ensure that students understand general rules for safe Internet practices, including how to protect their personal information on the Internet;
- is to help students develop an awareness of the personal image that they convey through the information they post on the Internet;
- aims to ensure that students understand federal and state laws regarding computer crimes; and
- supports students in exhibiting leadership for digital citizenship.

Standard 3. Demonstrate the ability to use technology for research, critical thinking, problem solving, decision making, communication, collaboration, creativity, and innovation.

This standard:

- focuses on applying a wide range of technology tools to student learning and everyday life;

- aims to ensure that students will be able to use technology to process and analyze information;
- is to help students develop skills for effective technology-based communication;
- includes the use of technology to explore and create new ideas, identify trends, and forecast possibilities; and
- aims to provide students with an awareness of how technology is used in the real world.

Resources

Massachusetts STaR Chart
http://www.doe.mass.edu/boe/sac/edtech/?section=star

DOE Local Technology Plan Guidelines for school years 2011-2015
(http://www.doe.mass.edu/edtech/planning.html

Massachusetts Technology Literacy Standards and Expectations
http://www.doe.mass.edu/edtech/standards/itstand.doc