

BIDDEFORD SCHOOL DEPARTMENT



Three-Year Technology Plan 2009-2012

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1. Community and Parental Involvement

This section describes a broad representation of the school community in the technology planning process. It includes a description of how the technology will be used effectively to promote community and parental involvement and increase communication with parents, including a description of how parents will be informed about the technology and its proper use.

Students and parents are welcome to participate in the regular bi-monthly meetings of the Technology Committee. The Assistant Superintendent periodically reports out on technology at regularly-scheduled school committee meetings.

Parental and community involvement will be expanded through the development and maintenance of web pages for the district web site. Each school will maintain a staff email directory which will be posted on the district site for parent access. The district web site will include:

- Teacher web pages
- Staff email directories posted on each school's web page
- Official District Policies, including those related to technology
- Special announcements
- Employment opportunities
- Biddeford School Committee meeting agendas and minutes
- Registration information and forms
- School and department web pages
- Athletic schedules
- Fundraising, District meetings, and school events calendars
- Links to Infinite Campus Parent Portal
- Emergency Notification System will increase communication with parents and guardians

Student technology policies and permission forms will be included in student handbooks, which are issued to students at the beginning of each school year.

Through the MLTI program (Maine Learning Technology Initiative), seventh and eighth grade students and parents will be involved in training and informational meetings through parent nights.

Email is the preferred and standard means of communication district-wide.

2. Vision for Technology in Biddeford Schools

This section establishes a vision statement linking the tools of technology with areas such as curriculum content, instructional practices, professional development strategies, and enhanced services.

The vision for the Biddeford School Community is to maximize the lifelong learning opportunities available to the staff, students, and community by integrating technology into the curricula.

Through professional development, instructional strategies will be continually modified to effectively utilize current and future technology. By being technologically competent, our students will be productive members of a constantly-changing society.

3. Goals for Student Learning

This section articulates specific goals, aligned with the Maine Learning Results, for using advanced technology to improve student academic achievement.

The Technology Committee recognizes that technology can have a direct effect on our implementation of the Maine Learning Results.

Teachers will be encouraged to integrate technology into the curriculum in a way that targets the Maine Learning Results in all subject areas.

Goal One: Integrate technology throughout the curriculum

- A. Include a variety of technology tools such as probes, digital cameras, digital microscopes, digital still cameras, camcorders, webcams, LCD projectors, Smart Boards, VOIP (e.g., Skype), iPods, etc.
- B. Design lessons to imbed basic computer skills at each grade level, moving away from teaching isolated skills.

Goal Two: Increase student and teacher access to computers

- A. Provide mobile labs to enable teachers to integrate technology in their classrooms.
- B. Provide three or more up-to-date networked computers for student use in every classroom.

Goal Three: Provide ongoing professional development opportunities to improve staff technology skills, by offering inservice time for:

- A. Basic computer use classes through Adult Education
- B. Technology integration
- C. Web page contributions and maintenance
- D. FirstClass Email system
- E. Infinite Campus (SIS System)

Goal Four: Maintain an infrastructure that supports current and emerging district needs

- A. Upgrade and maintain, as necessary, current fiber-optic network to increase bandwidth and network stability.
- B. Upgrade email server.
- C. Explore the possibility of using thin client solution on outdated computers as a cost-effective means of updating systems and increasing security.

Goal Five: Improve technology support by:

- A. Increasing the number of technicians
- B. Increasing time of Technology Integration Specialist to full-time, and providing a half-time integrationist for each elementary/middle school
- C. Create data management position to provide support for Infinite Campus
- D. Train student tech teams to do basic maintenance and troubleshooting.

Goal Six: Improve communication among teachers, students, and parents via email, the District web site, and MLTI StudyWiz.

- A. Open Infinite Campus Parent Portal to allow parental access to assignments and grades.
- B. Provide school and staff contact information on district web site.

Goal Seven: Adopt, promote, and enforce policies that encourage responsible technology use.

4. Identify Necessary Technology

This section includes an assessment of current technology used to determine what equipment and telecommunication services will be needed to meet new district goals and objectives.

Staff Computers:

All teachers now have at least one computer in their classrooms, however, many of these machines are aging. Those computers need to be kept up-to-date in order to make use of existing and future technology. At present, computers need to be capable of e-mail, web browsing, Microsoft Office or compatible Open Source application, and the Infinite Campus teacher Gradebook. All PCs on the network must be capable of running Windows XP or better.

Student Computers:

Our goal is to create computer clusters in classrooms as well as mobile laptop carts at each school site.

- K-5: improve the student-to-computer ratio in classroom to 5:1 and provide one mobile lab per floor
- 6-8: maintain and upgrade mobile labs for 6th grade teams, with the goal of moving to one-to-one laptops
- 9-12: maintain and upgrade mobile lab for each floor unless MLTI one-to-one program expands to high school

Presentation Systems:

As a result of the new construction, Biddeford Middle School has ceiling-mounted LCD projectors in every classroom. Purchase two or more LCD projectors per year at COT, BHS, BIS, BPS, and JFK to reach a goal of:

- 1 per classroom in the High School and COT
- 1 per two classrooms in Kindergarten, Primary, and Intermediate schools
- at least one Smart Board will be added at each school every year

Printers:

Ink jet printers are no longer purchased, repaired, or supported. Laser printers are purchased as needed.

5. Collaboration with Adult Literacy Service Providers

This section describes how the program will be developed, where applicable, in collaboration with adult literacy providers.

The Biddeford School Department supports the Biddeford Adult Education Office's network by:

- providing Internet and email services for the Adult Education staff
- providing technical support as needed

Biddeford Adult Education offers professional development opportunities for the Biddeford School Department teachers and staff such as:

- Introduction to computers
- MS Office Suite 2007
 - MS Excel
 - MS Word
 - MS Access
 - MS Outlook
 - MS PowerPoint
- Keyboarding
- Web Page Construction

The Biddeford School Community and Biddeford Adult Education have also collaborated on the First Teachers Family Literacy Project, a partnership with York County Head Start programs, which provides literacy opportunities to local families. These opportunities include Early Childhood Education with parent and child together, and New Books New Readers, a parent reading group.

6. Strategies for Improving Academic Achievement and Teacher Effectiveness

This section describes how funds, specifically Ed Tech funds, where applicable, will be used to improve academic achievement, including the technology literacy of all students attending schools in Biddeford; and how funds expended will improve the capacity of all teachers in Biddeford Schools to integrate technology effectively into curricula and instruction.

Goal 1: Improve the capacity of teachers to use and integrate technology effectively into curricular instruction.

- A. Hire full-time Computer Integration Specialist to assist teachers in integrating technology into the curriculum, and expand this position to include half-time support at each school site.
- B. District will continue to standardize on software/hardware that will enable teachers to:
 - Create and maintain web sites
 - a. Web Content Management software will enable staff to easily create and maintain web pages
 - Use software on any platform

- Move toward web-based applications
- C. The District will set aside time and provide training on inservice days, after school, and during summer.
- D. Teachers will continue to develop the technological skills necessary to enable them to collaborate through email messages and conferences, blogs, listserves, wikis, and forums.
- E. Teachers and District employees will offer technology mini-sessions and ongoing classes to District staff to enhance lessons with technology.
- F. Provide forums for sharing teaching strategies and technology integration lesson plans by encouraging the use of FirstClass conferences.

Goal 2: Replace computers through budget by continual funding to ensure that teachers and students have an up-to-date computer that not only will enable them to perform their duties, but also improve student achievement. This includes upgrading and maintaining mobile laptop carts.

Goal 3 Implement technology curriculum to help students to achieve the Maine State Learning Results and meet NETS (national) standards.

7. Integration of Technology with Curricula, Instruction, and Assessment

This section describes how technology (including software and electronically-delivered learning materials) will be integrated in curricula, instruction, and assessment. Included is a timeline for the integration.

The Biddeford School Department believes that technology is an essential part of any educational program. We aspire to have students use technology for online research and communication, collaboration, problem solving, decision making, and the creative presentation of ideas. Technology offerings are, and will continue to be, part of the ongoing professional development activities. The Technology Coordinator will work with the Program and Assessment Coordinator and the staff development committee to ensure a variety of technology offerings.

2009-10: During the last school year, the Technology Coordinator and the Computer Teachers developed a K-8 Technology Curriculum during the 2008-09 school year. This framework will serve as a guide for the Computer Teachers and the Technology Integration Specialist when collaborating with teachers to develop lessons, units, and themes that integrate technology into the curriculum.

- increase 40% Technology Integration Specialist to 100%
- Scholastic Read 180 Program for struggling readers to be added at BIS and BMS
- continue NWEA online testing for grades 2-9 students
- Schools will disaggregate NWEA/NECAP test results and analyze the data to provide information to inform instruction. Stepping Stones training will be offered to staff.

- upgrade mobile laptop carts to enable teachers to integrate technology in the classroom setting
- purchase additional interactive whiteboards (e. g., Smart Boards) for all schools
- begin implementation of Response to Intervention (RTI) for at-risk students. Research software to support implementation.
- train teachers to create classroom web pages for new web site
- finalize K-8 Technology Curriculum and begin implementation

2010–11: Technology Integration Specialist will continue to work with all schools and support laptop program(s) and Technology Curriculum.

- hire an additional Technology Integration Specialist
- begin implementing K-8 Technology Curriculum
- hire data manager to support teachers and staff
- continue purchasing Smart Boards and projectors for classrooms
- continue to upgrade mobile laptop carts to enable teachers to integrate technology in the classroom setting
- ongoing training offered for Infinite Campus and FirstClass email
- expand use of United Streaming/Discovery Learning streaming video subscriptions

2011-12 Expand use of SIS to track assessments and to disaggregate and analyze student data to inform instruction and make changes in curriculum.

- Continue to upgrade mobile laptop carts to enable teachers to integrate technology in the classroom setting
- Support district subscription for United Streaming (all schools)

8. Technology Type and Costs, and Coordination with Funding Resources

This section develops a step-by-step action plan, with timeline, that includes goals, activities, required hardware and software, costs, and funding sources. Describe the type and costs of technology to be acquired and how it fits within the current structure (use list developed in technology assessment in #4 above). Designate sources of funding, specifically Ed Tech funds, E-Rate funds, and funds from other Federal programs, and state and local sources that support technology acquisition and integration.

Technology Type, Cost, and Coordination with Funding Resources							
Timeline			Goals	Activities	Hardware/ Software	Cost	Funding
09-10	10-11	11-12					
√	√	√	Replace outdated computers	Purchase new computers	PCs, Linux, Macs	\$900 ea. 75 in 3 yrs. \$67,500	Budget
√	√	√	Replace lab	Purchase new computers	PCs, Linux, Macs	\$900 ea. \$25,000/yr.	Budget
√	√		Maintain and upgrade mobile carts for tech integration	Purchase deployment from DOE	MLTI iBooks MacBooks	478 iBooks Y1=\$135 ea. Y2=\$40 ea. \$83,650 total 99 MacBooks \$38,220 total	ARRA Funds Budget
√	√	√	Improve communication through implementation of Notification System	Purchase Emergency Notification System	Subscription Service	\$3.00 per student per year	Budget

√	√	√	Continue 5-yr. lease for fiber network	5-yr. lease for fiber	Fiber infrastructure	Yr. 1: \$30,000 Yr. 2: \$30,000 Yr. 3: \$30,000	Budget E-Rate
√	√	√	Upgrade Servers	Purchase 2 per year district-wide	Server and software licenses	\$5,000 ea. 6 in 3 yrs. \$30,000	Budget E-Rate
√	√	√	Upgrade/replace Network Switches	Purchase switches	Switches	\$1,000/yr.	Budget
	√		Internet Filtering Device	Purchase Hardware	Filtering Device	\$5,000	Budget
√	√	√	Replace inkjet printers	Purchase network laser printers	B & W and Color laser printers	\$150 ea. B&W (14) \$500 ea. Color (6) \$5,100 total	Budget
√	√	√	Projectors for whole-class instruction and Smart Boards in classrooms	Purchase projectors and Smart Boards	Projectors and Smart Boards	\$2,000/class (12) \$24,000 total	Budget Grants
√	√	√	Standardize productivity software	Purchase basic software for new systems. Purchase MS Office license for each staff computer	Order MS Office license for new staff systems and install Open Source apps on student computers	\$59 ea. for MS Office license Open Office-free	Budget

√	√	√	Increase computer-to-student ratio.	Purchase computers	Macs, Linux, PCs	K-3: 5 per yr. 4-5: 5 per yr. 6: 3 per yr. 9-12: 6 per yr. @\$900 each \$51,300	Budget
√	√	√	Provide streaming video content	Purchase subscription	District-wide subscription	\$1,500/yr. K-8=\$6,000 \$2,000/yr. 9-12=\$4,000	Budget E-Rate
	√	√	Virtual field trips via video conferencing	Purchase video conferencing equipment	Codec for each school site	\$10,000 ea. \$50,000 total	E-Rate Budget Grant
	√	√	Administrators need PDA/phone devices to manage calendars, use email, and store contacts.	Replace district cell phones with smart phones (e.g. iPhones, Blackberry, etc.) for administrators	PDA's/smart phones for Administrators	Price depends on phone/plan \$5,000	E-Rate Budget

9. Supporting Resources

This section describes the supporting resources such as services, software, other electronically delivered learning materials, and print resources that will be acquired to ensure successful and effective uses of technology.

Students will be able to make use of computer labs for:

- grade-appropriate software
- word processing/writing, spreadsheets
- desktop publishing, presentations, slideshows, and movies
- keyboarding for grades 4-5
- Success Maker®, Title I labs
- Read 180
- FASTT Math
- Online encyclopedias (e.g., World Book)
- Plato
- CAD program at COT
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Teachers:

- MS Office, Neo Office, or Open Office
 - Word, word processing
 - PowerPoint, presentations
 - Excel, spreadsheets
 - Access, databases
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- **Savvy Web Content Management**
 - Teachers can create and maintain web pages without using specialized applications
 - Ongoing training offered

- **Class Management Software**
 - Infinite Campus for attendance, grades, assignments, assessments, and report cards
 - High school and middle school report cards are currently generated from Infinite Campus
 - All grades take attendance in Campus
 - Parent Portal is scheduled to open up in 2009-10 to allow parent and student access to attendance, grades, and assignments
 - Intermediate school report cards will be generated from Campus in the 2010-11 school year
 - Primary grades will have the option of generating report cards in Infinite Campus if/when the district moves to standards-based grading
 - Assessments will begin to be entered in Infinite Campus in the 2009-10 school year
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- **Technology Integration**
Foster student technology learning through authentic teaching and learning experiences
 - inservices for specific software applications
 - inservices for integration
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- **Technology Department**
 - provide support and training
 - provide access to teacher and admin forms on District web site
 - opportunities for teachers and students to collaborate using video conferencing
 - enhance teacher and student use of technology to enhance learning and productivity.
 - Create a directory of teachers proficient in areas of technology to serve as a resource and build collaboration.
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- **Outside Trainers**
 - Inservices for specific software applications
 - Inservices for technology integration
- **Administrators**
- **Infinite Campus, Student Information System**
 - student schedules
 - attendance
 - academic records
 - demographic information
 - data analysis
 - reports
 - assessments
- **WebEx Training for Infinite Campus**

- online training offered

10. Steps to Increase Accessibility

This section describes the steps being taken to ensure that all students and teachers have increased access to technology. The description must include how Educational Technology funds, if applicable, will be used to help students in high-poverty and high-needs schools, or in schools identified for improvement or corrective action under Section 1116 of Title I; and how the steps taken will ensure that teachers are prepared to integrate technology effectively into curricula and instruction.

Provide Technology & Support	Implementation Strategies
Provide hardware and software	<ul style="list-style-type: none"> • Ensure that every teacher is equipped with an up-to-date computer with necessary software • Maintain current inventory of all district computers and printers • Continue 5-yr. plan for replacing outdated computers • Provide open/mobile labs to be used by students and teachers • Encourage students and community to make use of computer labs in Library/Media Centers and the Adult Ed Community Center • Title I labs at BPS (2), BIS, and BMS • Increase the number of large-screen displays at schools to allow for whole-class technology instruction and integration <ul style="list-style-type: none"> ○ LCD projectors ○ Interactive white boards (Smart Boards) • Streaming video subscription (e.g., United Streaming) • Video conferencing equipment and content
Provide technical support for teachers and administrators	<ul style="list-style-type: none"> • FirstClass “Techie Support” conference for technical support • Increase number of technicians to allow for one technician for every two schools • Train student tech teams at high school and middle school to assist with basic maintenance and troubleshooting. • Create Data Manager position to support Infinite Campus.
Provide training and professional development opportunities for teachers and administrators	<ul style="list-style-type: none"> • Data from staff surveys will be used to plan PD activities. • During regularly-scheduled inservice days, times will be set aside for technology instruction. <ul style="list-style-type: none"> ○ New staff will receive SIS and email training ○ Instructional technology ○ New programs or systems, e.g. RTI, will be introduced to all staff • Technology workshops will be offered during the summer and after school during the school year.
Title I, Section 1116	<ul style="list-style-type: none"> • Computer-Assisted Instructional Programs at BPS (2), BIS, and BMS <ul style="list-style-type: none"> ○ Software updated periodically • Trainers and consultants work with Title I staff

11. Promotion of Various Curricula and Teaching Strategies that Integrate Technology

This section describes how various curricula and teaching strategies that integrate technology effectively into the general curriculum and instruction will be identified based on a review of relevant research, and promoted to lead the improvements in student academic achievement.

Philosophy

The Biddeford School Department endeavors to bring both students and teachers to a level of technology competence that will enable them to embrace technology in a way that promotes

higher-level learning and utilizes an inquiry-based model of instruction. Ultimately, technology needs to be embedded in the curricula so that it is a seamless, invisible, and an integral part of instruction.

Resources for teachers

- FirstClass email system's conferences and calendars for sharing of strategies and best practices
- District web site provides space for classroom web sites
- Faculty-Staff links on District web site
- Hand-held instant response systems

Resources for students, parents, and community members

- School calendars posted on District web site
- Classroom web sites
- Graphic organizers such as Inspiration® and Kidspiration®
- Infinite Campus Parent Portal
- World book Online
- United Streaming
- Plato
- Read 180
- FASTT Math
- SuccessMaker

12. Professional Development

This section describes how ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel will be provided to further the effective use of technology in the classroom and library media center.

All teaching staff will be involved in ongoing learning activities that address the use of technology as a teaching tool in achieving the Maine Learning Results.

Teacher Use and Integration of Technology to Support and Inform Instruction	Primary Implementation Strategies
1. All teachers will use email as primary means of communication within district.	All staff will have access to district email for professional communication.
2. Teachers will use web pages, FirstClass email, conferences, and calendars to share strategies and collaborate with peers.	Provide inservices in fall to acquaint teachers with collaborative features such as work groups, conferences, and shared calendars.
3. Teachers will use technology to communicate with parents, families, and the Biddeford community.	Provide ongoing professional development for classroom web sites, newsletters, and Infinite Campus Parent Portal.
4. Teachers will be encouraged to develop classroom web pages to communicate with staff, students, families, and the community.	Content Management System will enable teachers to create web pages quickly, easily, and with minimal training.
5. Teachers will use technology to assess student skills and inform instruction.	Success Maker® software provides continual feedback for Title I students. Computer-based NWEA testing will continue to be used in grades 2-9 in the 2009-10 school year. Results are available the day following testing, enabling teachers to use data to drive instruction.

Administrators, Faculty, and Staff use of Technology	Primary Implementation Strategies
1. Administrators and staff will infuse technology into their work environment.	Use nationally-developed standards (NETS) to assess administrative technology use.
2. Office staff will become more proficient in using Microsoft Office and infinite Campus.	Consult with Adult Education to develop secretarial curriculum. Offer training on inservice days.
3. Administrators will become more proficient in using Infinite Campus.	Provide ongoing training during school year and during summer.

13. Innovative Delivery Strategies

This section describes how the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance-learning technologies, will be encouraged, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.

The Biddeford School Department participates in the innovative delivery of courses and curricula through the use of technology in the following ways:

1. Collaborative relationship between BSD and institutions of higher learning
2. Computer-based courses offered at the Center of Technology
3. Virtual High School
4. Streaming video
5. Video conferencing
6. Internet-based virtual field trips
7. ITV and ATM facilities located in nearby locations
8. USM online courses
9. BHS weather station
10. Probes used for data collection
11. Plato
12. Credit recovery program
13. Video ‘how-to’ tutorials for staff posted in FirstClass conference

14. Accountability Measures

This section describes the process and accountability measures which will be used to evaluate the extent to which the plan activities are effective in integrating technology into curriculum and instruction, increasing the ability of teachers to teach, and enabling students to reach Maine's Learning Results.

At monthly Technology Committee meetings, representatives from each school will share their success and challenges in integrating technology into the curriculum.

Surveys will be conducted at the beginning and end of each year to evaluate teacher computer literacy and the level of technology integration.

At the final meeting of the school year, the committee will review the technology plan and reflect on its impact on student learning and achievement. Findings will be reported to the superintendent and assistant superintendent if they are unable to attend.

The technology integration specialist will report on activities that have taken place over the course of the school year.