A Vision and Framework for 21st Century Teaching & Learning

Every Child ....Every Day
How do we prepare students to be life-long learners and to master the knowledge, skills and expertise that they need to achieve success in college, work and life?
To prepare students for their future...
we need to first understand what the future looks like.
Why 1:1 in Schs elevator pitch

#21CLHK
Feb 2011
To prepare students for their future...
We need to understand how students today learn best.
Engaging the iPod generation
Challenges for schools in a digital age
“The current generation of students was born into a highly technological world. They inhabit, navigate and communicate within a society which is both technologically-rich and information rich.”

Our Generation of Learners

..... the brain is extremely malleable. As today’s students have never known a day without these advanced technological tools, their brains have been physiologically conditioned to communicate and learn with these devices.

If you fail to grasp the needs of this generation, you risk the effectiveness of your educational efforts!
Digital Natives
“Digital Natives are used to receiving information really fast. They like to parallel process and multitask. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. “

However,

There is that expression: digital natives. Just because somebody knows how to send a text or get an email, play video games, or surf the internet, does not mean they know how to be digital learners.

We are finding that students do not know how to design a web page, use Google Documents, save a file, create PowerPoint presentations, or find appropriate research.

Digital Citizenship

Schools (Natick) who embrace 21st century skills will produce digital learners.
How do we prepare students to be life-long learners and to master the knowledge, skills and expertise that they need to achieve success in college, work and life?
Connect them to their world
“It’s time to focus on what students need to learn - and on how to create a 21st century learning environment that delivers results. In a digital world, no organization can achieve results without incorporating technology into every aspect of its everyday practices. It’s time for schools to maximize the impact of technology as well.”

Maximizing the Impact. The pivotal role of technology in a 21st century education system.
“One-to-One training of children is inevitable. We have gone through the trial stage and now we are in the implementation process. It is the future of education to have all student connected to the Internet. It will be the goal of all governments to make this happen.”

Mark Anderson, Strategic News Service top 10 predictions for 2008
Why a Digital Conversion?

Our world is changing.
Our job market is changing. (Half the jobs today require technology skills, expected to be 77% in the next decade – Bureau of Labor Statistics)
Our technology is changing.
Our way to access information is changing.
Our ability to contribute is changing.
Our classroom is changing?
“We need to prepare students for their future not our past.”

“Are our students globally competitive?” No

“The gap between what some of our students do at home and school is widening. We should be feeling a sense of urgency to tap the tools our students love to use.”
“Video and computer games are helping - not harming - our kids.” The real reason they play so much is that their games are teaching them to succeed in the Twenty-first Century.”

Marc Prensky, “Don’t Bother Me Mom - I’m Learning”
Why a Digital Conversion?

Change goes deeper than technology use

The common denominator is “What is best for learning?”
Relevance and Rigor

Dr. William Daggett, president of the International Center for Leadership in Education.
Framework for 21st Century Learning
4 C’s
A necessary set of competencies embedded into our rigorous curriculum:

• Critical Thinking
• Communication
• Collaboration
• Creativity

And an aptitude for technology
ADHD?????
We are living in the most intensely stimulating period on earth
Except when we come to school
Then we penalize kids for being distracted at school
This is why the arts are so successful they engage not enrage kids

HABITS OF INSTITUTION - We need to change our view of the mind from classic education/deductive reasoning to divergent thinking in a multisensory environment.
The Traditional Classroom

- Content delivered by the teacher in the classroom.
- Lecture and reading from textbooks are the main sources of learning.
- Students are assessed primarily on knowledge learned.
The 21st Century Classroom

Incorporates a blended learning environment where knowledge is discovered by the student using a variety of rich traditional and online interactive resources.
The 21st Century Classroom

Teacher facilitates by directing students to rich, learning sources and asking students to demonstrate what they know and are able to do?
The 21st Century Classroom

Teacher assesses for 21st century outcomes: core knowledge, creativity, critical thinking, problem solving, visual, written and oral communication, collaboration and teamwork around 21st century themes.
How do we prepare students to be life-long learners and to master the knowledge, skills and expertise that they need to achieve success in college, work and life?
Vision & Leadership
The Natick Public Schools

1 to 1 Learning Initiative
## Proper Implementation is the Key

### Pct. of Respondents Reporting Improvement

<table>
<thead>
<tr>
<th>Category</th>
<th>Proper 1:1</th>
<th>All 1:1</th>
<th>All Other Schools</th>
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<tbody>
<tr>
<td>Disciplinary action reduction</td>
<td>82%</td>
<td>65%</td>
<td>50%</td>
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<tr>
<td>Drop-out rate reduction</td>
<td>81%</td>
<td>58%</td>
<td>45%</td>
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<td>High-stakes test scores increase</td>
<td>85%</td>
<td>70%</td>
<td>69%</td>
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<td>College attendance plans</td>
<td>86%</td>
<td>66%</td>
<td>56%</td>
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<tr>
<td>Graduation rates increase</td>
<td>86%</td>
<td>57%</td>
<td>51%</td>
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Time for teachers to collaborate around how to improve student achievement
Vision for the Future

• Each student to access homework assignments and school information online, anywhere he or she can connect to the Internet.
• Each student to research topics online, download coursework, check e-mail, work in teams with other students, submit assignments online and apply critical thinking skills.
• Students to take charge of his/her own learning through experiential and virtual project and problem based, multi-disciplinary activities in digital formats.
• Parents/caregivers to communicate with their children’s teachers and view daily classroom work, homework and student achievement to help ensure progress and academic growth.
Vision for the Future

• Each teacher to interact one-on-one with students and parents/caregivers, to keep apprised of each student’s progress through online assessment tools, to integrate online content and learning resources with curriculum and instruction, and to expand learning beyond the walls of the classroom.

• Each teacher to determine the best classroom management and configuration for optimal teaching and learning for all students. This will include students working in small groups, virtual experiences, as well as individualized and differentiated student approaches in locations that optimize learning.
Guaranteed Results

Improved MCAS Scores
Improved Attendance Rates
Reduced Suspensions and Class Disruptions
AYP Improved
SAT Scores Improved
Better Prepared Students
Higher College Acceptances

Technology is a tool, not the end result

Mooresville, NC, Boston, Maine, Windham, NH, West Hampton, NY, California
How do we prepare students to be life-long learners and to master the knowledge, skills and expertise that they need to achieve success in college, work and life?