



# WAYLAND PUBLIC SCHOOLS GOAL 2 – INSTRUCTIONAL TECHNOLOGY

The Wayland Public Schools have engaged in a systematic process to review the District’s needs and create goals and initiatives to improve teaching and learning. On October 11, 2011, School Superintendent Dr. Paul Stein presented six priority areas which were subsequently approved by the School Committee as the District-wide Goals for the 2011-2012 school year. This document is designed to provide an overview of the progress-to-date on the implementation of Goal #2: “To increasingly employ instructional technology for the purpose of improving student understanding of core content knowledge and skills, including in the areas of formative assessment and differentiation.”

Wayland Public Schools is committed to the effective integration and meaningful use of instructional and information technologies to support, enrich, and extend student learning throughout the curriculum. Through integrated learning experiences, students will develop the technology literacy needed to acquire and manage knowledge, to succeed in school, and to thrive in an ever-changing, globally competitive world. In the Wayland Public Schools, all members of our school community will use technology to excel as learners and develop as leaders. Technology is a means for learning, not an end product of learning. Thus, technology will play a vital role in a 21st century process of teaching and learning that incorporates critical thinking and problem solving, creativity, communication, collaboration, and global citizenship.

At the beginning of the school year, the Elementary, Middle, and High School Principals defined school-based goals related to this District Goal for technology integration. In this report, using a strategic analysis tool, the strengths, weaknesses, opportunities, and threats (SWOT) for each goal was evaluated.

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## WAYLAND HIGH SCHOOL TECHNOLOGY INITIATIVE

**WHS1: Prepare for 1:1 Implementation**

*Timetable: FY12-13*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Professional development for classroom teachers                             <ul style="list-style-type: none"> <li>○ Wayland RISES</li> <li>○ ENO Board, Media Master, LanSchool, It's Learning, <i>Weekends Can Wait</i>, EnGrade, MassCUE conference (7 teachers)</li> </ul> </li> <li>• Studied and developed a budget                             <ul style="list-style-type: none"> <li>○ Device selection and leasing plan</li> <li>○ Drafted Support and Maintenance Plan</li> </ul> </li> <li>• Development of plan for roll out and accountability.                             <ul style="list-style-type: none"> <li>○ Updated AUP</li> <li>○ Laptop Care Policy</li> <li>○ Genius Bar</li> <li>○ Detailed 1:1 rollout plan</li> <li>○ Training on and development of evaluation plan</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Professional development for classroom teachers                             <ul style="list-style-type: none"> <li>○ PD is ongoing, but more is needed</li> </ul> </li> <li>• Managing expectations                             <ul style="list-style-type: none"> <li>○ Addressing perception that technology will be used everyday in every class</li> <li>○ Addressing unforeseen technology hiccups</li> </ul> </li> <li>• 1:1 is a HUGE initiative. Despite the hours/days of careful thought and planning, <i>we don't know what we don't know...</i></li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Explore multiple opportunities:                             <ul style="list-style-type: none"> <li>○ Online textbooks/E-pubs</li> <li>○ Access to and implementation of intervention strategies</li> <li>○ Reduction in the use of paper</li> <li>○ Teaching responsibility</li> <li>○ Teaching organization skills</li> <li>○ Outside PD offerings (MassCUE conference)</li> <li>○ Flipped classrooms</li> <li>○ Blended learning</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Perception that technology and instruction are separate constructs</li> </ul>

## WAYLAND HIGH SCHOOL TECHNOLOGY INITIATIVE

**WHS2: Maximize Technology Use in the New High School**

***Timetable: FY12-FY13***

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• General excitement about the many, many new technological features</li><li>• Professional development:<ul style="list-style-type: none"><li>○ The weekend can wait</li><li>○ Media Master</li><li>○ Eno Board training</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Fatigue - with the mid year move folks are feeling stretched</li><li>• Glitches with technology</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>• Merge technology initiatives with other initiatives - namely RTI and Advisory</li><li>• Online course development this summer for teachers to access</li><li>• Inter and intra-departmental peer sharing</li></ul>	<ul style="list-style-type: none"><li>• Time</li><li>• Other initiatives</li></ul>

## WAYLAND MIDDLE SCHOOL TECHNOLOGY INITIATIVE

WMS1: Expand Use of ASSISTments <http://www.assistments.org/>

*Timetable: Begin May 2012*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Provides individualized math practice</li> <li>• Offers teachers and students immediate feedback</li> <li>• Students can correct misconceptions (based on hints answers and explanations, rather than practicing a whole problem set incorrectly)</li> <li>• Enables teachers to efficiently tailor instruction based on feedback</li> <li>• Offers both multiple choice and opens response problems</li> <li>• Reviews previously mastered concepts</li> <li>• All WMS math teachers attended two days of ASSISTments training this winter. We have requested additional summer work for teachers to create customized problem sets to use with ASSISTments.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of difficulty in the problem sets - some problem sets are not very rich</li> <li>• Formatting issues in some of the Geometry problems (angle puzzles, interior angles in quadrilaterals, etc.).</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Pre-assess to gather data about the information that kids know before launching a unit</li> <li>• Differentiate effectively</li> <li>• Target specific skill deficits - a good match for Math Boost</li> </ul>	<ul style="list-style-type: none"> <li>• Access to computers during study or for students that do not have good access at home.</li> <li>• Need for ongoing professional development.</li> <li>• Time consuming for teachers to create customized problem sets that match the rigor we expect and desire.</li> <li>• Changes made to product are ongoing (beta)</li> </ul>

## WAYLAND MIDDLE SCHOOL TECHNOLOGY INITIATIVE

**WMS2: Use iPads for Learning**

***Timetable: Complete by June 2012***

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• High student engagement -&gt; highly motivating</li> <li>• Student creativity</li>   <li>• Small/easy to use</li> <li>• Tactile component (touch) adds to learning (using another modality)</li>   <li>• Good for problem solving (students demonstrate their understanding-choosing an app or using functions within an app)</li> <li>• An App for almost any possible use</li> <li>• Easy Internet access</li> <li>• Allowed access to audio books in a MUCH more user friendly way than Dragon Speak.</li> <li>• Able to project for use as a teaching tool</li> </ul>	<ul style="list-style-type: none"> <li>• Need to teach to it—how to use it</li> <li>• Online keyboard is not as good as a laptop</li> <li>• Difficult to switch between App windows which can impact productivity</li> <li>• Must setup one email account on the iPad to get work off the iPad. The setup cannot be done from within the building (port blocked)</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Engages students with productivity issues</li> <li>• Offers new ways to complete projects/tasks that can be tedious manually</li> <li>• Offers online organizational capabilities for students with organizational challenges.</li> </ul>	<ul style="list-style-type: none"> <li>• Time for teaching students - every new move/need/App etc. requires instructional time (and time is precious)</li> <li>• Time for training teachers - and PD conversations about best uses</li> <li>• Challenging to buy Apps and eBooks - Lots of glitches</li> <li>• Funding for iPads</li> <li>• Management is time-consuming and not intuitive (setting up accounts on each iPad, downloading Apps, updating Apps, etc.)</li> <li>• Teacher buy-in for use as an educational tool</li> </ul>

## WAYLAND MIDDLE SCHOOL TECHNOLOGY INITIATIVE

**WMS3: Expand Use of Technology Tools for Teaching**

***Timetable: Complete by June 2012***

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Having more laptops in the building enabled in-class writing assignments and access to online resources/activities. Students were able to continue their online work in study hall.</li> <li>• Use of computers is more consistent. The digital experience and opportunity for gaining technology skills has grown.</li> <li>• More teachers used iMovie for preparing videos for teaching (Science) as well as assigning student projects (English &amp; SS)</li> <li>• It's Learning - all 8th grade students access and submit Science homework posted in the LMS (Learning Management System). Also used as an asynchronous learning tool to train the DC Trip photographers.</li> <li>• Blogging in French &amp; Spanish classes to review material and post journal entries. Students embedded voice recordings with <a href="#">Vocaroo</a>.</li> <li>• Google Sites were used to create a collaborative 7th grade online field guide</li> <li>• Excitement around student response systems (voting eggs) as an instructional technology that allows for formative or summative assessment in an efficient and engaging way.</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers need to ensure that all students have the skills to complete digital assignments.</li> <li>• Not all teachers are comfortable integrating technology</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• There are numerous digital resources for teachers to explore and evaluate. Sharing the information with colleagues will lead to enhanced lessons and discussion of best practices.</li> <li>• With expanded computer access in the classroom to creativity software, there is an opportunity for more project-based learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Student computer use must be monitored</li> <li>• Maintaining so many devices</li> <li>• Time to teach the technology skills</li> </ul>

## WAYLAND MIDDLE SCHOOL TECHNOLOGY INITIATIVE

**WMS4: Use Google Docs for Student Collaboration**

***Timetable: Complete by June 2012***

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Students collaborate with one another on writing and projects</li> <li>• Teachers and students communicate about writing pieces asynchronously</li> <li>• Features such as side comments and color coding facilitate creative response and dialogue.</li> <li>• Powerful archival capability</li> <li>• Ability to track the "compositional footprints" of a young writer offers insight into their processes and can guide our instruction.</li> </ul>	<ul style="list-style-type: none"> <li>• Occasional technology disruptions</li> <li>• Some formatting limitations</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Much potential in terms of best practice</li> <li>• Being able to coach students in an expeditious/efficient way, facilitated by the speed and convenience of technology is compelling.</li> </ul>	<ul style="list-style-type: none"> <li>• Largest roadblock to using Google Docs in a truly democratic fashion is time.</li> <li>• Responding to all students in a robust way is not feasible yet.</li> <li>• More professional development is needed.</li> </ul>



## WAYLAND ELEMENTARY SCHOOLS TECHNOLOGY INITIATIVE

**WES1: Establish routines in each classroom that incorporate Lexia at least 2x 20 minutes a week during the school day.**

*Timetable: December 2011 – June 2012*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Research-based proven intervention program</li> <li>• Teachers are comfortable using this intervention program</li> <li>• Students are familiar with the program</li> <li>• Progress reports can be generated to understand student proficiency levels</li> <li>• Allows teachers to target explicit areas of literacy development</li> </ul>	<ul style="list-style-type: none"> <li>• Establish priority to make it happen on a routine basis</li> <li>• Requires teacher instruction and monitoring</li> <li>• Organization of data for effective analysis</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Increase in use during the school day for students needing more practice with literacy skills</li> <li>• Explore the use of Lexia at home</li> <li>• More time for routine use of reports</li> </ul>	<ul style="list-style-type: none"> <li>• Competing curriculum</li> <li>• Technology Access at home for all students</li> <li>• Technology Support</li> <li>• Parent training to expand effective use of Lexia at home</li> <li>• Financial restrictions to increase concurrent seats</li> </ul>

## WAYLAND ELEMENTARY SCHOOLS TECHNOLOGY INITIATIVE

**WES2: Examine iPad applications to support curriculum and differentiated instruction.**

*Timetable: June 2012*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Staff and students demonstrate enthusiasm for use of iPad Apps</li> <li>• Used with ELL students for developing Literacy skills and for translation</li> <li>• Numerous cross-curricular applications</li> <li>• User-friendly for all users</li> <li>• New Apps are being developed daily</li> </ul>	<ul style="list-style-type: none"> <li>• Streamline the process for purchase, installation and management of iPads and Apps</li> <li>• Not enough iPads to effectively integrate in every classroom</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Use of iPads to increase differentiation within content areas</li> <li>• Enhances the opportunity to integrate technology as an educational tool</li> </ul>	<ul style="list-style-type: none"> <li>• Network upgrades needs to be implemented to effe</li> <li>• New apps are developed and updated so rapidly, making current app installs out-dated</li> <li>• Time for teachers to review and select current, relevant Apps</li> </ul>

## WAYLAND ELEMENTARY SCHOOLS TECHNOLOGY INITIATIVE

**WES3: All classroom teachers will maintain individual websites to promote Communication.**

*Timetable: Jan – Sept. 2012*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Uniform tool of communication for families</li> <li>• Robust information resource for the Community</li> <li>• Showcases richness of the curriculum</li> <li>• Provides consistent resources for student access (homework, project due dates, curriculum materials)</li> <li>• Ease of use with Content Management System (GUI interface)</li> <li>• Quality instruction is provided by Instructional Technology Specialists</li> </ul>	<ul style="list-style-type: none"> <li>• Time to integrate professional development around website design and development</li> <li>• Inconsistency in website content and resources</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Access to NEW Sharp School Teacher Pages</li> <li>• Access to design Google Sites</li> <li>• Grade level collaboration around website content and resources</li> </ul>	<ul style="list-style-type: none"> <li>• Additional demand on teacher time</li> <li>• Equal access for families and students at home</li> <li>• Teacher resistance to create and maintain a classroom website</li> </ul>

## WAYLAND ELEMENTARY SCHOOLS TECHNOLOGY INITIATIVE

### WES4: Provide Professional Development to Promote Technology Integration

*Timetable: June 2012*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Teacher release time for one to one training with technology specialist</li> <li>• We have technology resources available for us to use</li> <li>• Staff has an interest in using technology</li> <li>• Staff is engaged in creating curriculum units that integrate technology</li> <li>• Quality instruction is provided by Instructional Technology Specialists</li> </ul>	<ul style="list-style-type: none"> <li>• Consistent training of staff on new technology when purchased</li> <li>• Process for selection and use of technology needs to be established</li> <li>• Collaboration on curriculum integration is limited</li> <li>• Quantity of technology resources that teachers still need to be trained on, as growth in this area has been at an exponential pace</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Recognize the opportunity for integrating technology into the curriculum</li> <li>• Use of its learning to collaborate on the development of curriculum units</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of training</li> <li>• Keeping up with more and new technology</li> <li>• Time to develop and deliver training</li> </ul>