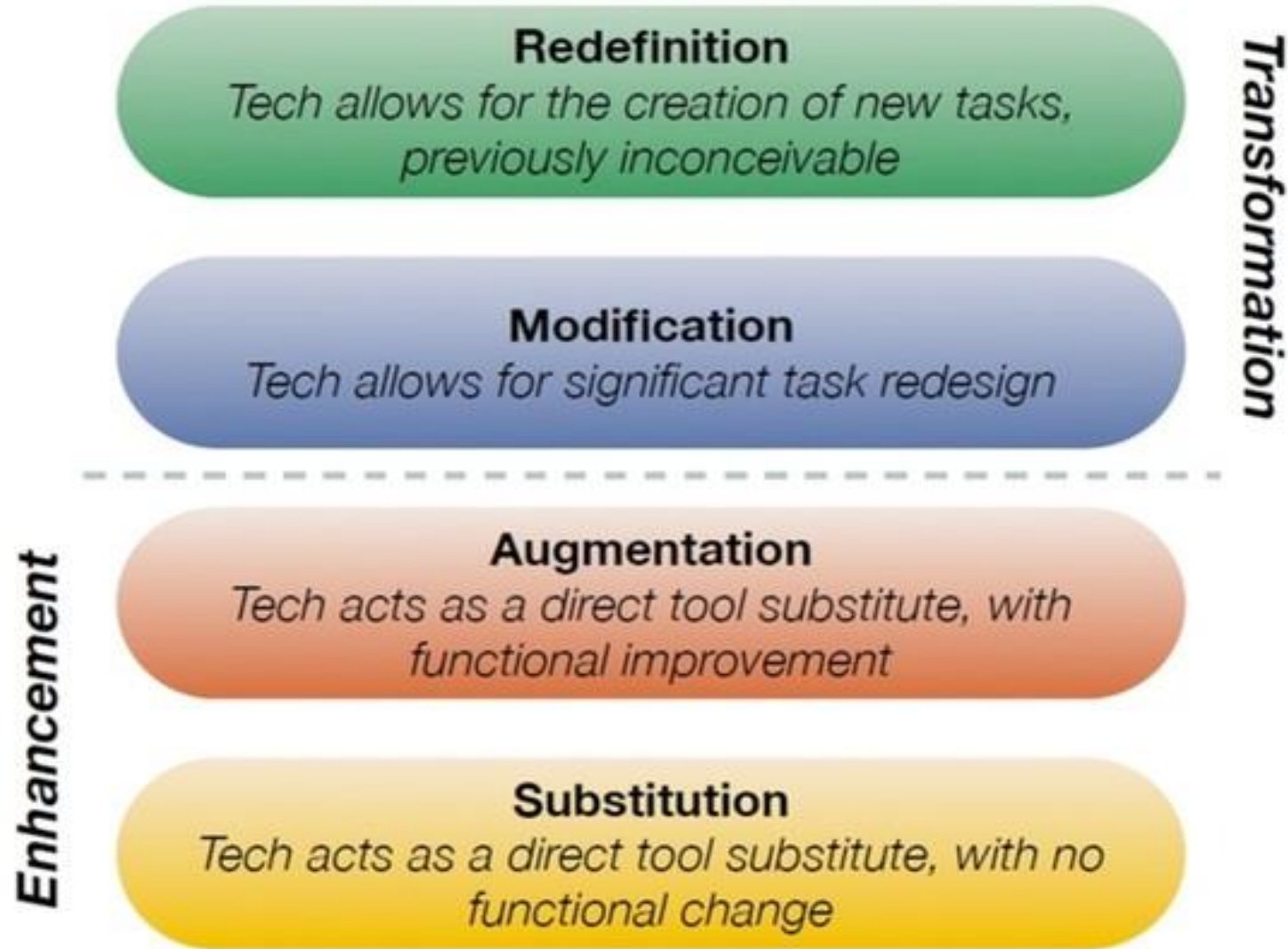


Wayland Public Schools
November 17 School Committee Meeting

Technology Spotlight #1

EcoMUVE

SAMR Model



EcoMUVE

Multi User Virtual Environment

- A curriculum research project of the Harvard Graduate School of Education that uses immersive virtual environments to teach middle school students about ecosystems and causal patterns.
- Implementation enabled by Wayland's PLC and computer initiatives.

Wayland Public Schools

December 1 School Committee Meeting

Technology Spotlight #2

itsLearning

Learning Management System

- Paperless
- Readings, videos, images, assignments, assessments are all on line.
- Assignments completed on line.
- Materials such as study guides are fluid and can be amended at will.
- Discussion boards
- Integral to success of 1:1 Initiative

Benefits

(or: Why it dramatically changes the way teachers can teach.)

- Transparency
- Flexibility
- Accessibility
- Accountability

Wayland Public Schools
December 15 School Committee Meeting

Technology Spotlight #3

Hour of Code

Hour of Code

Code

- Proficiency in computer science, which includes knowing code, is a new 21st Century literacy skill.
- Learning code teaches skills which transfer to other areas, including logical thinking, problem solving, and persistence.
- Computer science has relevancy in all fields.
- The economy needs more computer scientists and people who know how to code. It holds the promise of being an interesting and lucrative career.

Hour of Code

Goals of Code.org

- Bringing Computer Science to US Schools
 - At HS: Exploring Computer Science, Computer Science Principles
- Removing barriers & establishing policies: Change the rules to accelerate computer science adoption.
 - Incorporate across the curriculum
 - Count as high school math or science requirement.
- Breaking stereotypes with the Hour of Code: Increase participation by women and underrepresented groups.

[Link to Code with Anna and Elsa](#)

Wayland Public Schools

January 5 School Committee Meeting

Technology Spotlight #4

One Minute Reader

One Minute Reader

One Minute Reader is a digital version of ReadNaturally, a research based fluency program which the district has been using for approximately 5 years. The app is used on iPad Mini's.

Educational Goals

- Enhances foundational skills in reading fluency and comprehension at the elementary level.
- The elementary language arts curriculum requires students to acquire essential skills in the areas of decoding, reading fluency, and comprehension of reading material.
- This program is focused on fluency, which is the gateway to comprehension. One minute reader has students read along with a fluent reader. Fluency is not just reading rate; it involves expression and **volume, phrasing, smoothness** and **pace**.
- Comprehension: main idea, literal, vocabulary, inferential, short answer.

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- Comprehension: main idea, literal, vocabulary, inferential, short answer.

One Minute Reader



[Link to ReadNaturally](#)

Wayland Public Schools

January 20 School Committee Meeting

Technology Spotlight #5

Operation Lapis

Operation Lapis

- Goal: To teach Latin as a language in which students have the opportunity to hear, speak, read, and write in Latin. In this way, students experience Latin as a language through which people *communicate*.
- This is transformative. In contrast, the traditional approach to Latin education focuses on reading, grammar and translating.

Operation Lapis

- This is a 2-year course of study, replete with well laid out grammatical, cultural and historical learning objectives.
- The world is at risk. Students are charged with the task of finding the Stone of the Ages, which holds the key to saving civilization. The stone weaves the story together.
- Students, in teams of 4, track the story of Roman History.
- Each team is given a character from Ancient Rome which they operate like an avatar.
- Every Monday, students are given a mission and presented with a situation that they need to resolve. They must construct a plausible reply to the situation through the voice of their avatar.
- Mission control, secretly the teacher, observes students discussing their proposed responses -- redirecting or correcting them (on line) in order to assure they remain true to their historical character and to the proper use of Latin.
- There is an on-line textbook to which they can refer.
- The following Monday, teams act out their responses in Latin to the previous week's mission. Peers rate their performance. Awards and points are issued.

Operation Lapis

- Operation Lapis fully employs the power of the Internet.
 - Learning is truly interactive
 - Education is put into the students' hands.
 - Students become researchers, able to follow their interests and delve deeper into their studies on line.
 - It is a differentiated approach to learning.
 - It flips the classroom.
 - Formative assessment is built into the program throughout.

Wayland Public Schools
February 5 School Committee Meeting

Technology Spotlight #6

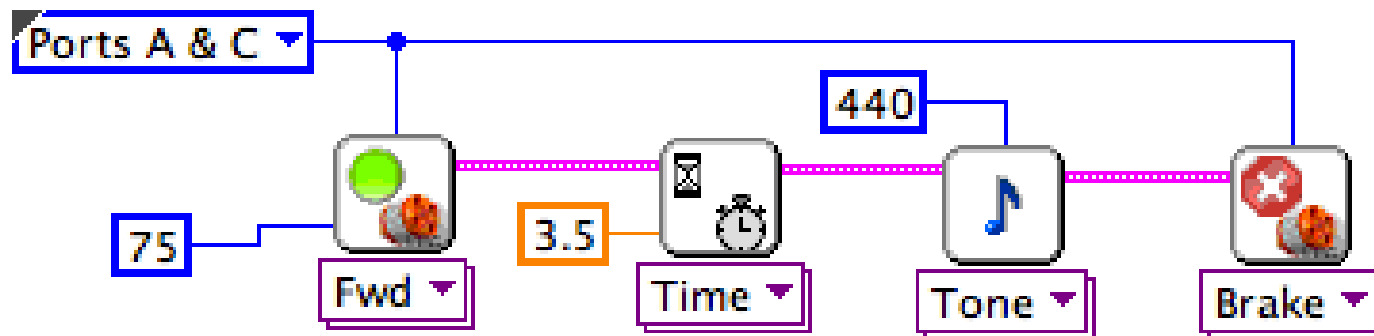
Visual Programming

Visual Programming

- Emphasizes the use of icons and images for creating programs.
- Utilizes icons that are easily modified to control hardware such as motors and sensors.
- Click and drag, then connect to hardware right away: instant gratification.
- Used in Robotics and Principals of Technology.
- Paul Shiffler began using this in 2005, and its now even more accessible due to the 1-1 initiative.

Visual Programming

- LabView
 - Developed in 1986 for industrial use
 - Utilized to control components of NASA Mars rover projects



Visual Programming

- NXT-G
 - Utilizes a “drag and drop” interface
 - Designed specifically for educational use

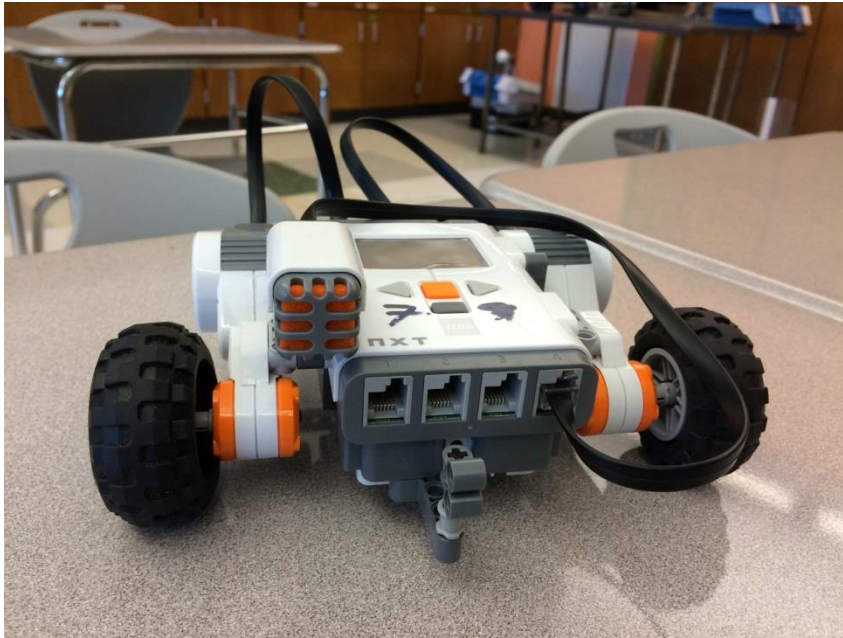


Visual Programming

Why Visual Programming?

- Acts as an “equalizer” – a student’s math or science skills do not necessarily limit access
- It involves engaging, hands-on activities that call on a variety of learning styles that, for instance, appeal to visual and kinesthetic learners.
- It involves a variety of skills including computer, design, and construction skills that have real world applications.
- Allows for immediate interaction with “real” things – motors and sensors.
- Gives students access to programming software that is used in industry.
- It is performance based, and it provides instant feedback – both software and hardware “tell” a student if they have completed their task.
- Students learn about data collection and see how machines can graph data.
- Melds abstract and logical thinking with practical applications.

Visual Programming



Student Projects

- Students can use a distance or light sensor to have this Lego vehicle simulate a pedestrian crossing or navigate a maze.
- Students can also use Vernier sensors which are designed to measure many different variables such as temperature, Oxygen, CO₂, and sound to program the vehicle.

Wayland Public Schools
February 23 School Committee Meeting

Technology Spotlight #7

Lexia

Lexia

- Provides individualized, targeted practice students need to master their reading skills.
- Differentiated and interactive
- Automatically places students at the appropriate level of instruction and monitors student progress for skill developments and time on task.
- Reinforcing: students can see their progress, receive award certificates for each level of completion.
- Appeals to auditory and visual learners.
- Focuses on critical reading skills that have been identified by national reading experts.

Lexia

PHONOLOGICAL AWARENESS

- Rhyming
- Identifying beginning and ending sounds
- Segmenting compound words and syllables
- Blending compound words and syllables
- Segmenting sounds
- Blending sounds

PHONICS / PHONOLOGICAL AWARENESS

- Letter-sound correspondence for consonants, short vowels and consonant digraphs
- Identifying beginning and ending sounds and letters
- Identifying medial sounds and letters, short and long vowels
- Segmenting, blending and manipulating sounds with letters
- Short-vowel words, Silent-e words, Vowel-r words, Vowel combination words
- Open syllable words, consonant-le words
- Two-syllable words
- Three-syllable words

VOCABULARY

- Picture-word matching (Oral)
- Categorical sorting
- Picture-word matching (Reading)
- Pre-primer through third grade sight words
- Anglo-Saxon prefixes and suffixes
- Latin prefixes, roots and suffixes
- Greek combining forms

AUTOMATICITY / FLUENCY

- Phoneme intervals for blending and segmenting
- Timed discrimination of easily reversible letters
- Timed medial vowel discrimination with letters
- Automatic recognition of short vowel words
- Timed identification of simple and complex words and syllables
- Automatic recognition of words with vowel digraphs
- Automatic identification of irregular words
- Modeled paragraph reading

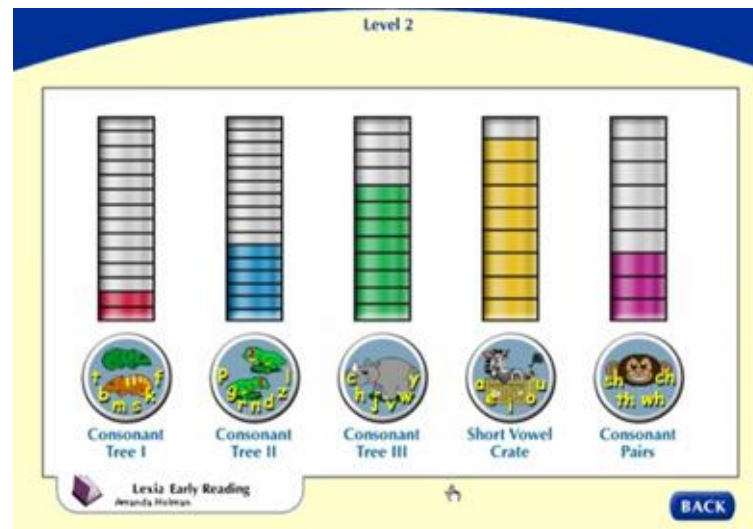
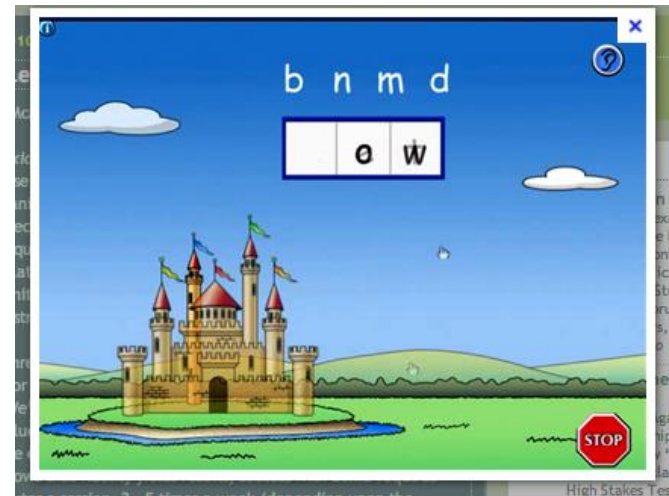
COMPREHENSION

- Categorical and associative thinking
- Comprehension of words and word parts
- Use of picture support to enhance comprehension of words, phrases, sentences and paragraphs
- Word construction from syllables and prefixes, stems and suffixes
- Systematic cloze procedure comprehension of sentences, paragraphs and stories

Lexia

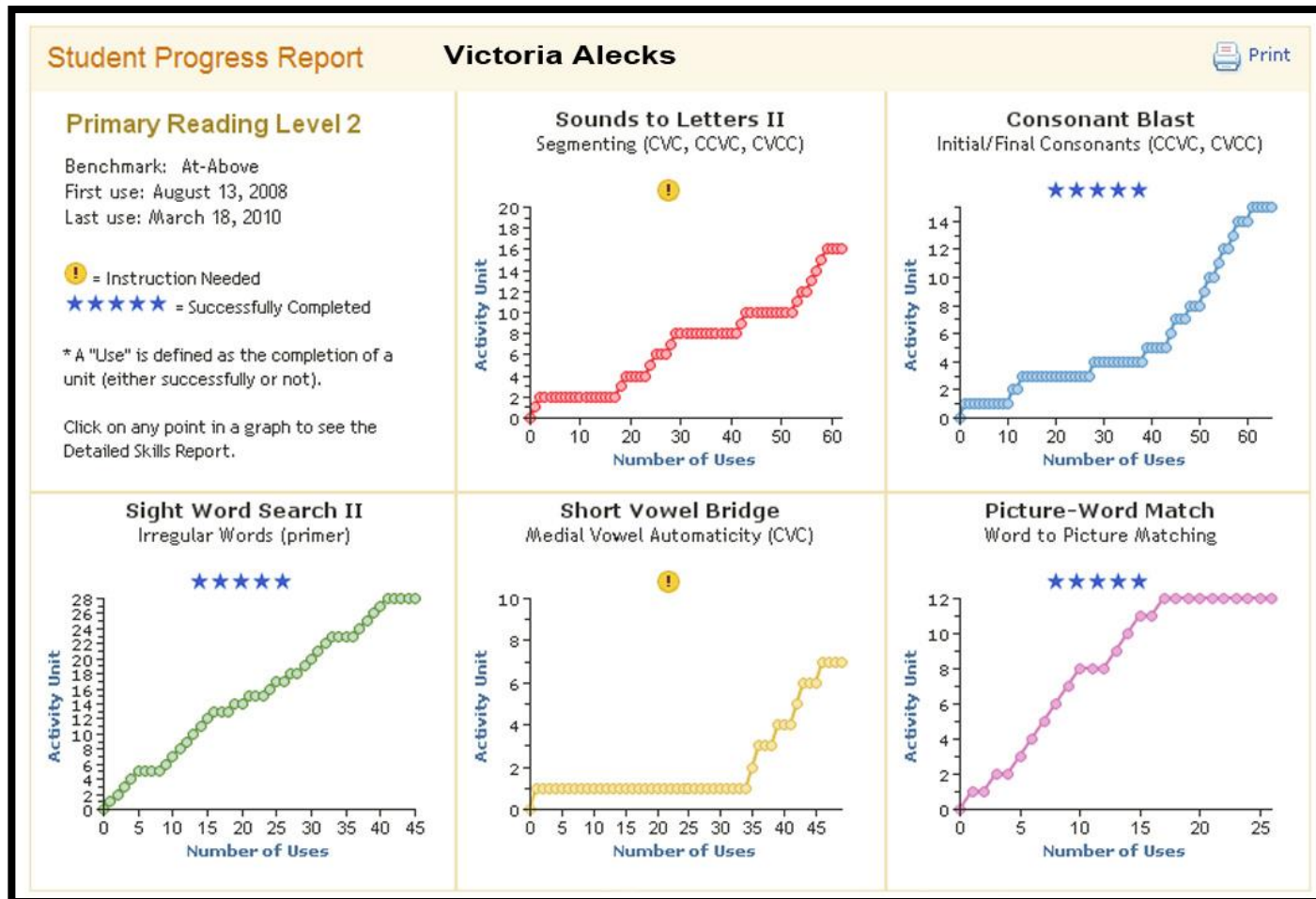
- Used at least 2 times a week, usually in 20 minute blocks.
- All students in Grades K-2. In Grades 3-5, it is used mostly for students with more intensive needs.
- Students systematically progress through the software; fosters independent learning.
- Teachers can monitor progress and mistakes, identifying needed support and scaffolding.
- Reports can be automatically emailed to teachers, showing student progress, including recommendations for additional lessons and practice.
- Teachers check reports to track if students are having difficulty with any of the practice activities
- If so, then students are pulled into an instructional group to work on a particular skill
- Lesson plans and practice sheets accompany program. There is also an at-home component.

Lexia: Examples



Lexia: Student Data Reports

Lexia organizes data about areas in which the child is succeeding and areas where the child needs more practice, or more specific skill instruction. Teachers have access to this data from children's Lexia work at home and at school.



Lexia: Student Data Reports

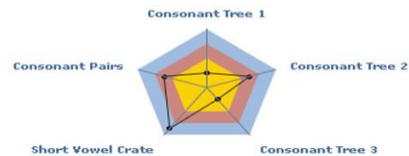
Student Skills Report

Connor W Alecks

Early Reading Level 2

Print

Skills Report Early Reading Level 2



■ Successfully Completed
 ■ Currently Working On
 ■ Instruction Needed

Detail

Instruction Needed

Connor W Alecks needs instruction on the following Skills. The specific Unit he/she had difficulty on is indicated.

ER Level 2 - Skills: general letter knowledge

Skill	Unit
Sound/Symbol (t,b,m,s,k,f)	Unit 7: Review of letters presented in units 1-6
Sound/Symbol (c,h,j,v,w,y and brother pairs)	Unit 7: Review of letters presented in units 1-6

Currently Working On

Connor W Alecks is working on the following Skills. The specific Unit he/she is working on is indicated.

ER Level 2 - Skills: general letter knowledge

Skill	Unit
Sound/Symbol (p,g,r,n,d,z,l)	Unit 7: Introduce a letter (p,g,r,n,d,z,l), identify as beg. sound
Sound/Symbol (sh,th,wh,ch)	Unit 5: Review of digraphs presented in units 1-4

Successfully Completed ★★★★★

Connor W Alecks has completed the following Skills.

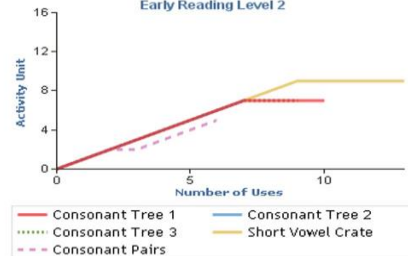
ER Level 2 - Skills: general letter knowledge

Skill
Sound/Symbol (short vowels)

Not Started

Connor W Alecks has started all Skills in ER Level 2.

Progress Report Early Reading Level 2



Detail

Usage Report

January 1, 2010 - May 28, 2010



Detail

Wayland Public Schools

March 9 School Committee Meeting

Technology Spotlight #8

Google Earth

Google Earth

- The foundational task: knowing “where.”
- A fundamental skill: knowing how to locate ourselves in relation to other people, places and things.
- Functionally, if not consciously, we all have a spatial map in our brains.
- The brain is constantly activating information and processes we need while deactivating things that would clutter our thoughts.

Google Earth

Some History

- During the Cold War, satellites were first used to view the Earth.
- In the 1980's spy satellites were opened for companies' use.
- The Keyhole Project developed the first satellite maps. Google later became interested in and bought the project. This was the origin of Google Earth.
- Later, other companies' images and information were loaded into this platform.

Google Earth

- Google Earth is a global tool which connects the user to the whole world.
- It can be employed to discover visual patterns in space.
- It is a tool that fosters the analysis and synthesis of visually enhanced information.
- Students can creatively superimpose layers of information and display it all on a map. Options include roads, 3D buildings, cities, oceans, weather, and political borders – to name just a few.
- Google Earth is not web-browsed, so it does not work on Chromebooks. It does work on both PC's and Mac's.

Google Earth

Students can...

- insert videos, pictures, street views, and hyperlinks.
- save and merge files.
- use other software in conjunction with Google Earth. For instance, Quicktime can be used to create a movie of a Google Earth presentation.
- create visually compelling, creative, and informative class projects (Example from history class: project on the European Union, overlaying historic maps)
- upload their projects to Google Earth Community and whole world can see it. Some student projects have been viewed by over 50,000 people.
- find something on Google Earth Community, customize it, and then repost to the Google Earth Community.

Google Earth

Teachers use Google Earth to ...

- share projects with other teachers.
- create interdisciplinary lessons.
- show students places they've never seen before.
(Example from world languages: showing roots)
- have students create tours and travelogues to places that they have been or would love to be.
(Example from Cape Cod and DC trips: students add their own pictures and journals from the trip)

Student Presentation

Wayland Public Schools

March 23 School Committee Meeting

Technology Spotlight #9

Computer Science and Programming

Computer Science and Programming

Programming:

- ... requires students to think logically, problem-solve, collaborate, and communicate.
- ... sits at the intersection of logic and creativity.
- ...exemplifies 21st Century Skills.

Computer Science and Programming

- **Exploring Computer Science**: Students develop a deeper understanding of how computer software and hardware work, get experience with electrical engineering concepts and have an introduction to writing code.
- **Computing with Python**: Students learn the fundamentals of writing computer programs, from helpful utility programs to interactive games.
- **Android App Development**: Students learn to write apps for Android mobile devices using the Java language. The class focuses more on creating interesting products than advanced programming techniques.
- **AP Computer Science**: Students learn the fundamentals of writing computer programs with an Object Oriented Design approach, and advance to more sophisticated concepts, enabling the creation of complex programs.

Computer Science and Programming

Arduino (Purchased through a WPSF grant)

- Students learn to engineer a circuit to achieve a set of goals.
- They create circuits with sensors, motors and buttons, and write the code to control them.
- They are given a micro-controller to hook up a series of sensors and output devices (using circuits and wires).
- They program the chip, using software on their computer, to process an input to produce a desired output.

Computer Science and Programming

```
ServoLEDPainter | Arduino 1.6.0
File Edit Sketch Tools Help
ServoLEDPainter $
2
3 Servo myServo;
4
5 int const ledA = 3; //bottom
6 int const ledB = 4; //middle
7 int const ledC = 5; //top
8
9 void setup() {
10   myServo.attach(9);
11   pinMode(ledA, INPUT);
12   pinMode(ledB, INPUT);
13   pinMode(ledC, INPUT);
14   myServo.write(0);
15 }
16 void loop() {
17
18   if(digitalRead(ledA) == HIGH){
19     myServo.write(60);
20   }
21   else if(digitalRead(ledB) == HIGH){
22     myServo.write(120);
23   }
24   else if(digitalRead(ledC) == HIGH){
25     myServo.write(180);
26   }
27 }
```

16 Arduino Uno on COM4

ARDUINO



Computer Science and Programming

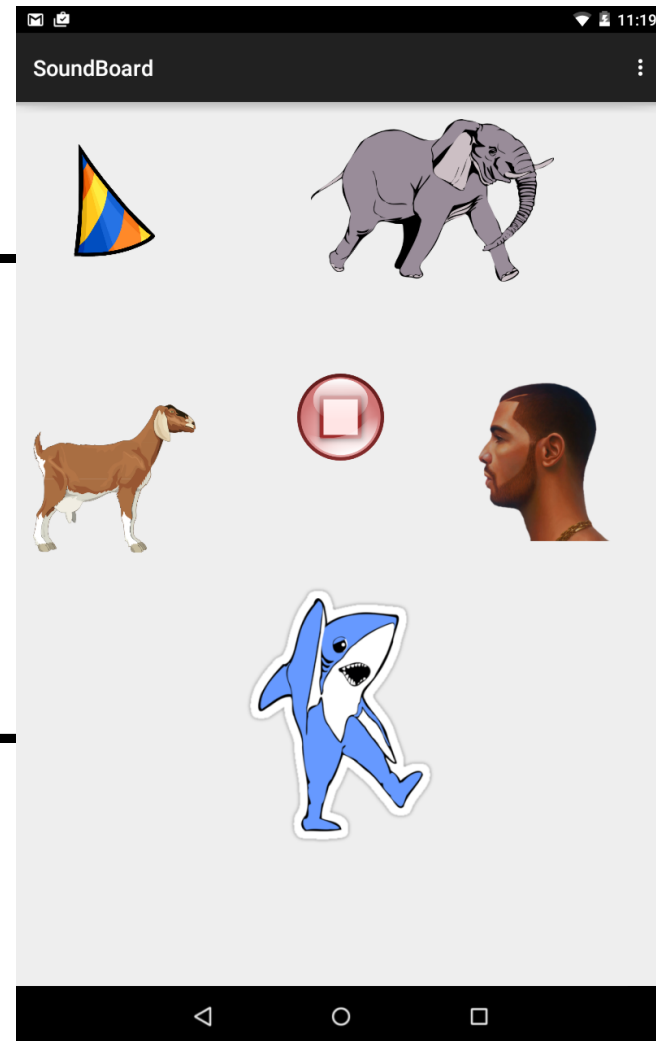
Android

- Students learn to create a variety of programs for Android phones and tablets.
- They utilize features on these devices such as the touch screen, accelerometer, and GPS.
- They employ the JAVA computer language. JAVA, created in 1990, is not machine specific. It is one of the most popular computer languages in the world.
- Students come to understand how basic functions (such as the touch screen) work. This enables them to explore and create.

Computer Science and Programming

ANDROID

```
final ImageView goatPic = (ImageView)findViewById(R.id.goat);
mpGoat = MediaPlayer.create(MainActivity.this, R.raw.screamgoat);
goatPic.setOnClickListener(new View.OnClickListener() {
    @Override
    public boolean onTouch(View v, MotionEvent event) {
        if (event.getAction() == MotionEvent.ACTION_DOWN){
            if (sound == true)
                mpGoat.start();
            return true;
        }
        return false;
    }
});
```



Computer Science and Programming

AP Class Sample Assignment: Space Invaders

- Students are asked to create a space invaders game AND add something beyond the basics. As the teacher puts it, he asks his student to, “add more awesome.”
- Students grow curious about something they want to accomplish. They will go onto the Internet and find their way. There is a lot of discovery, collaboration and learning that goes beyond the required AP curriculum itself.

(Space Invaders: 3 samples of student work)

Computer Science and Programming

Trends

- The 1:1 initiative accelerated student progress in these courses because they could work on their assignments throughout the school day and not have to stop when class ended.
- 13 years ago, there were 7 students, all boys, in the teacher's first class. Now he teaches 84 students, 34 of whom are girls.

Wayland Public Schools
April 27 School Committee Meeting

Technology Spotlight #10

Symphony Math

Symphony Math

- Is a common core-based independent instructional program which supplements the general curriculum
- Assesses as well as instructs
- Builds skills at a pace that matches each student's needs
- Covers content in Grades K-4
- Is used for practice, extensions, or interventions. (In the upper grades, it is more likely to be used for interventions.)
- Employs visuals, differentiated learning, and instant teacher reports -- all made possible by the technology.

Note: In grades K- 2, students go to a skills lab, which was an outcome of the last set of contract negotiations. Symphony Math and Lexia are two activities done during this lab time.

[\[Link to Introduction to Symphony Math Video\]](#)

Symphony Math: The Underlying Approach

There are six components for each concept covered:

- Manipulatives
- Manipulatives and Symbols
- Symbols (abstract level)
- Auditory
- Story problems (real life problem solving)
- Mastery (which is where fluency is emphasized)

Focuses on conceptual understanding, in contrast to an approach that counts on memorization. Fluency comes after mastery.

(Note: The district has other software, such as Fast Math, which serves as fact practice.)

Symphony Math: Differentiated Learning

- Students progress through tiered stages, or skill levels.
- The program constantly differentiates tasks for each student based on their task performance.
- The program automatically determines when the student needs practice and when her or she should move on to the next concept.
- Students can click on a life preserver tool icon and the program will walk them through a problem that is challenging to them.

Symphony Math:

Sample from Scope and Sequence

Stage	Concept (Aligned with Common Core Standards)	Example
1.2	Identifying Numbers	Find '3'
1.3	Counting Forward	4, 5, 6, ?
1.4	Counting Backward	7, 6, 5, ?
2	More/Less/Same	Find '1' more than 6.
2.1	Find 'One More'	Find '1' more than 6.
2.2	Find 'One Less'	Find '1' less than 5.
2.3	Find 'More'	Find 'Taller.'
2.4	Find 'Less'	Find 'Less'.
2.5	Same	4 = ?
3	Add & Subtract to 5	$3 + 2 = ?$
3.1	Beginning Addition: Missing Result	$3 + 2 = ?$
3.2	Beginning Addition: Missing Change	$? + 1 = 5$
3.3	Beginning Subtraction: Missing Result	$5 - 1 = ?$
3.4	Beginning Subtraction: Missing Change	$4 - 2 = ?$
3.5	Adding 0 and 1	$6 + 0 = ?$
3.6	Subtracting 0 and 1	$7 - 1 = ?$
3.7	Commutative Property	$7 + 1 = 1 + ?$
4	Ten as a Unit	$8 + 2 = ?$
4.1	Introducing 10	$8 + 2 = ?$
4.2	Making 10	$? + 7 = 10$
4.3	10 Plus	$10 + 3 = ?$
4.4	Subtracting with 10	$10 - 4 = ?$
5	Comparing Numbers	$? = 13$
5.1	Equals	$? = 13$
5.2	Greater Than	$8 > ?$
5.3	Less Than	$8 < ?$

Mastery Round Levels, or timed mastery rounds that practice math facts, are activated when students master particular Stages.

Symphony Math: Assessment

- The program will know if a student needs help by his or her use of the life preserver, by how often a problem is repeated, and by the amount of time spent on the problem.
- The assessment itself differentiates, as the program adjusts the questions based on a student's answer to previous questions.
- The program provides detailed teacher reports on each student and for the whole class.
- Reports can be sent home.
- In addition to ongoing built-in assessment, students are screened and benchmarked three times a year, providing data on growth, as well as whether students are progressing on or above grade level.
- The program will also provide teachers with activities tailored to individual student's skills.

Symphony Math

Instructional Status #1.pdf - Adobe Reader

File Edit View Window Help

Open [Icons] 1 / 1 [Zoom] 100% [Tools] Fill & Sign Comment

symphony math

Report Generated by: TRICIA O'REILLY
12:04 pm EDT

Current Summary		Screener	Benchmarker		Instruction			
Group	Students	Status	Score	Percentile	Alerts	Use	Mastery	Stage
Class: Ms. Weig	19	<div><div></div></div>	603	64	94	<div><div></div></div> 0%	<div><div></div></div> 44%	8.8

Instruction Status report created Apr 20 2015

Student	Time	First	Last	Usage	Progress	Help	Stage	Practice	Award
Student 0859	12h 38m	Sep 11, 2014	Apr 9, 2015	!	!	✓	15.3.6	--	Mar 12
Student 0860	12h 38m	Sep 11, 2014	Apr 17, 2015	!	✓	✓	15.1.5	--	Mar 24
Student 0862	9h 26m	Sep 11, 2014	Apr 9, 2015	!	✓	!	3.4.6	3.4	Sep 19
Student 0881	9h 57m	Sep 11, 2014	Apr 9, 2015	!	!	✓	6.1.2	--	Apr 02
Student 0883	14h 1m	Sep 11, 2014	Apr 9, 2015	!	✓	✓	12.5	--	Feb 03
Student 0886	6h 41m	Sep 11, 2014	Apr 2, 2015	!	✓	!	3.2.4	3.2	Nov 20
Student 0895	10h 41m	Sep 11, 2014	Apr 9, 2015	!	✓	✓	3.6.4	--	Oct 16
Student 0899	16h 41m	Sep 11, 2014	Apr 6, 2015	!	!	✓	12.1	--	Mar 26
Student 0907	8h 6m	Sep 11, 2014	Apr 2, 2015	!	!	✓	12.1	--	Apr 02
Student 0911	11h 40m	Sep 11, 2014	Apr 9, 2015	!	✓	✓	6.1.6	--	Mar 12

Symphony Math

#2 Instruction Daily Progress 0862.pdf - Adobe Reader

File Edit View Window Help

Open | [Icons] | 1 / 2 | 101% | [Icons] | Tools | Fill & Sign | Comment

symphony math

Report Generated by: Quantum Tech
1:04 pm EDT

Current Summary		Screener	Benchmarker		Instruction						
Student	Grade	Status	Score	Percentile	Time	Use	Progress	Help	Stage	Practice	Award
Student 0862	1	Borderline	525	44	9h 26m	[Red Circle]	[Green Circle]	[Yellow Circle]	3.4.6	3.4	[Star] Sep 19

Instruction Daily Progress

report created Apr 10 2015

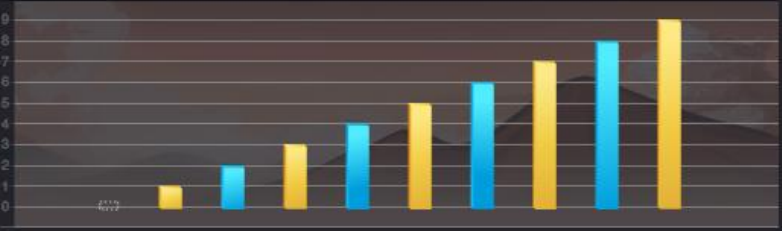
Stage	Concept	Standard	Challenge Type	Score	Task Detail
▼ Apr 09, 2015 09:50am EST, 22 minutes					
3.4.6	Beginning Subtraction: Missing Change	K.OA.2	Focus	In Progress	[Progress Bar]
3.4.6	Beginning Subtraction: Missing Change	K.OA.2	Focus	75%	[Progress Bar]
▼ Apr 02, 2015 10:08am EST, 11 minutes					
3.4.6	Beginning Subtraction: Missing Change	K.OA.2	Focus	In Progress	[Progress Bar]
3.4.5	Beginning Subtraction: Missing Change	K.OA.2	Focus	88%	[Progress Bar]
▼ Apr 02, 2015 09:55am EST, 2 minutes					
3.4.5	Beginning Subtraction: Missing Change	K.OA.2	Focus	In Progress	[Progress Bar]
3.4.5	Beginning Subtraction: Missing Change	K.OA.2	Focus	81%	[Progress Bar]
▶ Mar 26, 2015 09:56am EST, 17 minutes					
▶ Mar 20, 2015 09:41am EST, 13 minutes					
▶ Mar 19, 2015 09:51am EST, 22 minutes					
▶ Mar 17, 2015 01:50pm EST, 10 minutes					

Symphony Math

Symphony Math Task Preview: BETA

content.symphonylearning.com/assets/student/taskPreview.html?taskID=3421

Create: the whole is 4. How many must be taken away to make 2?



Ms. Weig

Create Report

Instruction

Use	Progress	Help	Stage	Practice	Award
1	✓	●	3.4.6	3.4	★ Sep 19

report created Apr 10 2015

Stage Type	Score	Task Detail
In Progress	75%	1 2 3 4 5 6 7 8 9 10

3.4.6 Beginning Subtraction: Missing Change K.OA.2 Focus

Apr 02, 2015 10:08am EST, 11 minutes


Stage Type	Score	Task Detail
In Progress		1 2 3 4 5 6 7 8 9 10

Symphony Math

#4 SMExtraPractice3_4.pdf - Adobe Reader




File Edit View Window Help

Open [Icons] 1 / 13 51.6% [Icons] Tools Fill & Sign Comment




Name: _____ Date: _____  Manipulatives




Draw the missing dot card.




Example

 -  = 


Start with this card. Take away this card. This card is left.

1  -  = 

2  -  = 

3  =  - 

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Stage 3-4: Subtraction: Missing Change to 5 Page 1 of 13 

Wayland Public Schools
May 11 School Committee Meeting

Technology Spotlight #11

Read&Write for Google Docs and LearningAlly

Read&Write for Google Docs

- A text to speech and speech to text tool
- Can use on any Google document, as well as documents in a PDF format.
- Particularly useful for students with dyslexia and other learning disabilities, as well as ELL students.
- Sped department coaches students with specific needs to use this, but it can be useful for all students.

Read&Write for Google Docs

- The software enables students who struggle with reading and writing to show what they know.
- Gives students independent access to their learning.
- Makes it easy for students to independently revise their work.
- Helps instill good study and organizational habits.

Read&Write for Google Docs

Features...

- Text to speech (Can vary the voice, speed, and continuity of reading.)
- Word prediction
- Dictionary
- Translator
- Picture dictionary
- Speech to text
- Fact finder
- Highlighters
- Collect highlights (with note taking option)
- Vocab list

Sample Google Doc: Thoreau's Life

LearningAlly

- Essentially an audiobook program, originally created to assist visually impaired and dyslexic.
- Funded through a state grant.
- The text is narrated by humans.
- The audio library has over 80,000 books.
- Students can use any personal computer (including the school's MacBooks) or smart phone. Does not work on Chromebooks.

LearningAlly

- Students search the library and add the book to their bookshelf.
- Teachers can track students' progress. They can log in and look at what books and genres students are reading and how much they read on any particular night.
- Students can be directed toward appropriate grade-level reading material to help them access the content material.

[Link to LearningAlly Video](#)

Wayland Public Schools
May 26 School Committee Meeting

Technology Spotlight #12

Wayland High History Project

Wayland High History Project

- Research + Storytelling With Evidence
- All projects test whether we can see national trends or developments in a microcosm: our town or region.
- Projects serve as memory-based community service projects.
- Students don't cover the curriculum, they uncover it. There is no set script; the process is a messy one.
- Students inquire, explore, raise questions and discover answers together.

Wayland High History Project

Technology is employed as an integral part of each stage of the project:

- Research
- Writing
- Publishing

Students begin by looking at national trends and developments...

Wayland High History Project: Research

Aunt Bessie's \$1,000,000

It is a cold February day in 1913. Your great Aunt Bessie, whom you love greatly, calls you to her side. She is not long for this world and softly whispers that she is giving you \$1,000,000, her entire life savings. Her dying wish is that you give the money to three Progressive reforms and you are to pick the causes. For reasons known only to Aunt Bessie, she wants the money distributed in a specific way: \$600,000 to the most needy cause, \$300,000 to the next most needy cause, and \$100,000 to the third most needy cause.

In order to determine the best use of the money, you need to rapidly research several Progressive Era reforms and plug into the chart all of the terms/people/concepts below (along with a simple definition that links each to the reform effort). Lastly, write a letter to Aunt Bessie that includes (a) an interesting salutation followed by (b) a 3-point thesis that refers to how you will give her money away. In other words, *how will you allocate her million dollars so that she may rest in peace?*

Progressive Era Reform	Key People	Accomplishments/Outcomes (<u>include</u> & <u>italicize</u> one non-listed fact/outcome that you deem worthy or interesting)	Representative Image
Temperance			
Trust-busting/business regulation			
Settlement House Movement			
Women's suffrage			
Consumer protection			
Political reform			
Child labor & general welfare			
Conservation			

Wayland High History Project: Jessica Henderson, Resident Rebel

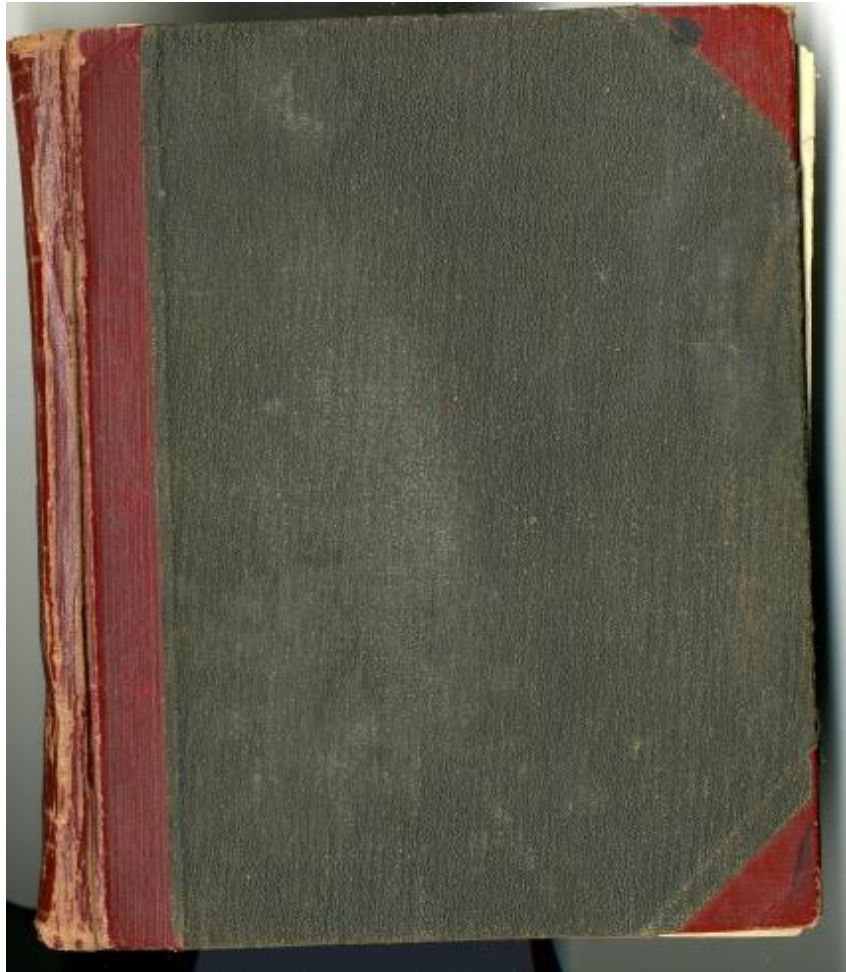


Wayland High History Project: Research

- Itslearning
 - The teacher scans primary source documents, for instance from the Wayland Historical Society, and uploads these documents into itslearning.
 - The class discovered Jessica Henderson and adjusted the project.
- On line
 - In order to find out more about Jessica Henderson, the class used research sites such as Ancestry.com, newspapers.com, genealogy.com, the library on congress website, and more. Databases could be accessed through the high school's library media center webpage. Information was gathered, for instance, from census reports and FBI records.
- Oral History
 - The Wayland connection can lead to surprising discoveries.

Wayland High History Project

Research: Wayland Women's Club



87

The Wayland Woman's Club met Tuesday April 17 at 4 o'clock with Mrs. Henderson.

The meeting was called to order by Mrs. Henderson as the President was absent.

The minutes of the previous meeting were omitted.

Mrs. Henderson introduced Mrs. Lucia Ames Mead who gave an address on The World Crisis.

Mrs. Mead expressed regret for what she called the hysterical fear of war, existing in this country.

She reviewed the history of the United States briefly to show that not once in our history had we been attacked by a foreign power. She spoke of the constitution of the United States, of the wisdom of having a Supreme Court, and of the easy and natural settlement of vexing questions, which had

Wayland High History Project: Research

ancestry

SIGN IN

You might just find the story of a lifetime.
How would you like it to begin?

Place of Birth
Date of Birth
Date of Death
Age at Death
Years of Marriage

A GREAT FIRST STEP

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CARBONDALE PRESS

CHOKE ACTRESS

SAFETY COM

Memorial Day Auto Race

IM CRETE CONQUERED

See papers by location

Wayland High History Project: Research



REPORT MADE BY: Paul O. Curtin. PLACE WHERE MADE: Boston, Mass. FILE NO. 178488 DATE WHEN MADE: April 16, 1918. PERIOD FOR WHICH MADE: April 15, '18.

TITLE OF CASE AND OFFENSE CHARGED OR CAPTION OF MATTER UNDER INVESTIGATION:
In Re: Mrs. Walter B. Henderson;
(General War Matter.)

STATEMENT OF SPECIAL AGENT IN CHARGE, FIELD OFFICE, AND AGENTS OF FIELD OFFICE, PLACES VISITED, ETC.:
At Wayland, Mass.

Continuing previous investigation, Agent went to Wayland, Mass., where Mrs. Walter B. Henderson resides and interviewed Postmaster M. W. Hynes and Constable J. Charles Vincent.

Postmaster M. W. Hynes stated that Mrs. Walter B. Henderson, otherwise known as Mrs. Jessica L. C. Henderson was prominently known around Wayland and was always getting into arguments and disputes over various matters. She was pro-German ~~xxxx~~ from the beginning of the war.

Constable J. Charles Vincent said that Mrs. W. B. Henderson was a fool; crazy, and erratic in her actions. She has stated many times in public that she would rather kill her son Hayden, (Age about 22) in her front door yard, that to see him drafted. Constable Vincent has not seen the son for several months although he saw an express package at the station marked Lavenport, Iowa, and he does not think he is in the army.

Mrs. Henderson does not believe in religious ceremonies of any kind, does not attend church, although sometimes gives money to the Unitarian Church. Last fall when some U. S. Army enlistment posters were placed around Wayland, Mrs. Henderson came along in her automobile and tore down several posters and said to various persons that she was proud to be able to save the life of some young man by preventing him from enlisting after reading such a poster.

Agent considers that Mrs. Henderson is a wilful violator of the law both in thought and deed and should have some one in authority censure her.

Agent considers investigation now closed.

REPORT OF THIS REPORT FORWARDED TO: Boston, Mass. Office.

Wayland High History Project

The class discovered Jessica Henderson's activist legacy with the following causes:

- Pacifism during WWI (noted in her FBI record)
- Suffrage Movement
- Animal Rights: anti vivisection, anti vaccination, and vegetarianism
- Defense Committee for Sacco and Vanzetti
 - Vanzetti's sister stayed with Jessica Henderson at her home in Wayland during the trial.

Wayland High History Project: Writing

- Students are assigned chapters based on themes or chronology.
- Students collaborate and jointly write essays using shared Google Docs.
- Editors are assigned to each chapter to coordinate writing and put it in publishable form.

Wayland High History Project: Writing



Wayland High History Project: Publishing

- The class employs website creation software, Weebly.com
- Students develop a website to publish results.
- Example: [Lt. Col. Martin W. Joyce Papers](#)
 - Materials now archived in the Holocaust Museum in Washington, D.C.
 - [Link to WayCAM video](#) (1:03:50)

Wayland Public Schools
June 8 School Committee Meeting

Technology Spotlight #13

Digital Passport

Digital Passport

LARK

Good Citizenship in the Digital Age

- Legal
- Appropriate
- Responsible
- Kind

Digital Passport: Common Sense

- “We **rate**, **educate**, and **advocate** for kids, families, and schools.”
- “Common Sense is dedicated to helping kids thrive in a world of media and technology. We empower parents, teachers, and policymakers by providing unbiased information, trusted advice, and innovative tools to help them harness the power of media and technology as a positive force in all kids’ lives.”
- “Media and technology are at the very center of all our lives today -- especially our children’s. Kids today spend over 50 hours of screen time every week.”
- “The media content they consume and create has a profound impact on their social, emotional, cognitive, and physical development.”

Digital Passport: Common Sense

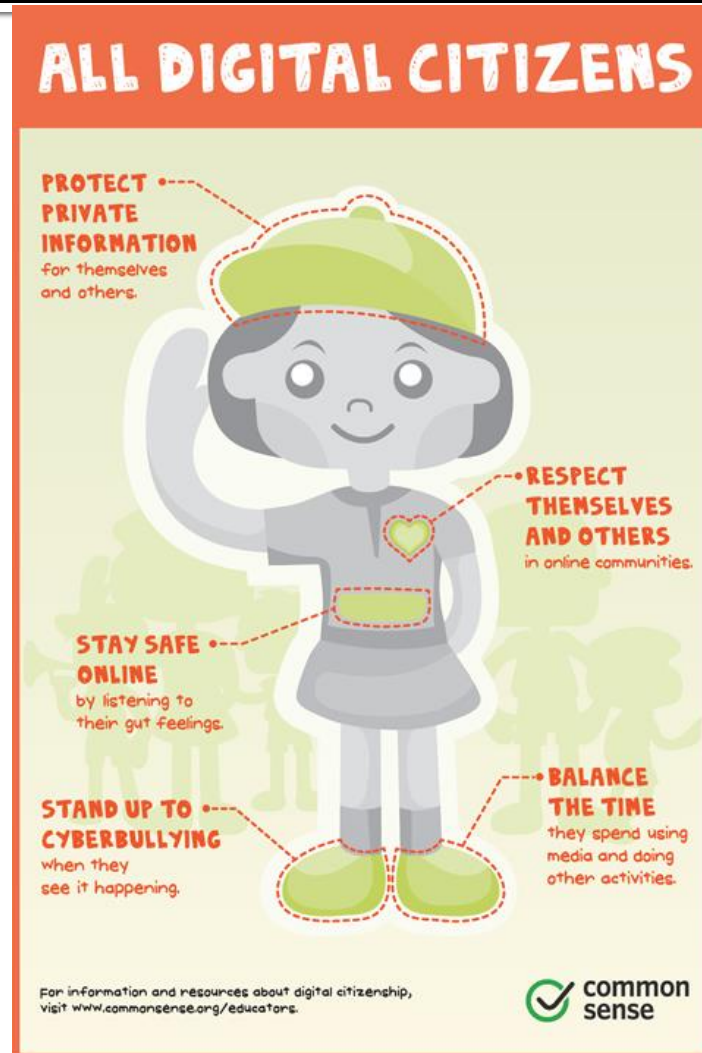
- “Common Sense Education provides teachers and schools with **free** research-based classroom tools to help students harness technology for learning and life.”
- “Our K-12 Digital Citizenship Curriculum and interactive games teach students how to make safe, smart, and ethical decisions in the digital world.”
- “**Digital Passport** introduces students, **grades 3-5**, to a suite of engaging videos, fun games, and collaborative classroom activities that address key issues facing kids in today's digital world.”

Digital Passport Modules

- **Communication: Twalkers**
 - Students learn why it's important to avoid multitasking with a cell phone, and the benefits of focusing on one task at a time.
- **Privacy: Share Jumper**
 - Students evaluate examples of online messages and decide what information is appropriate to share and when. They learn that nothing is truly private or erasable online.
- **Cyberbullying: E-volve**
 - Students make choices about what to do if they or their friends are cyberbullied. They are encouraged to “evolve” into an “Upstander” – someone who takes action to stop cyberbullying, rather than standing by.
- **Search: Search Shark**
 - Students learn how to choose effective keywords for searching online. They practice selecting keywords that are most relevant to a search prompt and learn hints for narrowing their search results.
- **Creative Credit: Mix-n-Mash**
 - Students remix media content to create a new creative piece, giving proper credit to artists whose images and sound clips they use.

Digital Passport

- [Link 1](#)
- [Link 2](#)



Wayland Public Schools
June 22 School Committee Meeting

Technology Spotlight #14

ASSISTments

ASSISTments

- A new model for practicing math and completing homework. The model reinforces learning and helps retention.
- Designed by the Worcester Polytechnic Institute (WPI)
- A comprehensive set of practice problems which are aligned with the Common Core standards by grade level.
- Problem sets are available for Grade 2 through high school. In Wayland, it is used at the middle school level, primarily in math (although there is some use in Social Studies and Science).
- Teachers can choose from a set of questions created by WPI and other teachers, or design their own.

ASSISTments

- ASSISTments provides instant feedback. Students know if they are on the right track (correct answers) or if they are not.
- Mistakes can be corrected quickly by the student who can figure out the answer on his or her own
- Students experiencing difficulty solving a problem can ask for hints that will lead them in the right direction.
- Detailed data reports regarding problem completion are readily available to both students and teachers.

ASSISTments

ASSISTments Problems

- Problems may be ASSISTments “certified” OR teacher designed questions
- Problem Sets: 5 questions which employ scaffolding -- Correct answers are marked with a checkmark. Incorrect responses send students back to the problem, often figuring out on their own how to make corrections. If they don't know something, they can ask for hints.
- Skill Builder Sets: Organized by common core standard and grade level, students are given as many problems as they need. They continue to work until they get three correct in a row.
- Reassessments: After correctly completing a skill builder set, students are assigned reassessments which ask similar problems after one, two, four, and eight weeks later. If they get these problems wrong, they go back to the skill builder set.

ASSISTments

An Exemplar: In one Wayland 6th Grade Classroom ...

- ASSISTments was used to entirely replace a traditional homework model. As such, students received instant feedback on each problem completed and skill sets are revisited over time.
- Homework consisted of three main components:
 - ASSISTments problems which focus on last week's math topics (Students should have acquired a fairly solid understanding after a week of in-class guided practice.)
 - ASSISTments problems which are designed for "reassessment and relearning" (The computer assigns this as needed.)
 - Projects and write-ups to harder problem solving questions (including POWs - Problems of the Week)
- 3-5 problem sets were assigned on a weekly basis (132 to date). Students were given assignments on Mondays with a Friday due date, giving them more choice about how and when to do them.

ASSISTments

Problem Sets

 [Middle School](#)

 [Grade 5](#)

 [Grade 6](#)

 [Ratios and Proportional Relationships](#)

PSAEG77 - Understanding ratios (6.RP.A.1) - Set A

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAFZ9M - Understanding ratios (6.RP.A.1) - Set B

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAEG9S - Understanding unit rates (6.RP.A.2) - Set A

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAFZ9P - Understanding unit rates (6.RP.A.2) - Set B

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAR5T2 - Equivalent Ratios (6.RP.A.3a) - Set A

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

 [The Number System](#)

ASSISTments

Skill Builders

[Grade 6](#)

[Ratios and Proportional Relationships](#)

PSAGH7 - Finding the Ratio 6.RP.A.1

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAHGC - Equivalent Ratios 6.RP.A.3.A

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAKS9K - Converting a Percent to a
Decimal 6.RP.A.3c

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAUK57 - Converting Fractions, Decimals
and Percents (6.NS.B.3 and 6.RP.A.3) EX

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAHSH - Converting a Percent to a
Fraction 6.RP.A.3c

[Assign](#) ~ [Bookmark](#) ~ [View Problems](#) ~ [Test Drive](#)

PSAMR8Z - Converting a Fraction to a
Percent 6.RP.A.3c EX

ASSISTments

Sample Problem

Tutor

<https://www.assistments.org/assistments/student/index.html?preview=true&assignmentID=PR417446#143448>

ASSISTments Teacher Student Builder Logout

Settings About

Problem: 1 / 1

→ The scale factor...

Assignment: Problem #PSARAPA

Problem ID: PRARAPA [Comment on this problem](#)

The scale factor = 5. The smaller perimeter = 60 ft. The smaller area = 45 ft^2 .

What is the larger area? (do not include labels)
























































Type your answer below (mathematical expression):

Submit Answer

Show hint 1 of 2

ASSISTments

ARRS Progress Summary

Assignments	Original Skill Builder	Reassessment Test Progress	Next Test Release Date
121 - Finding the Volume of Two Rectangular Prisms 5.MD.C.5c (Problem Set PSAB58U)		   	2015-07-02 15:00:00
120 - Finding the Volume of a Rectangular Prism Using the Formula (1) 5.MD.C.5b (Problem Set PSAG5KD)		   	2015-08-04 15:00:00
118 - Plotting Points Using a Graph 6.NS.C.6c (Problem Set PSABFQK)		   	2015-08-04 15:00:00
119 - Finding the "x" Coordinate, given "y", using a Graph 6.NS.C.6c (Problem Set PSAG5RF)		   	2015-06-23 15:00:00
117 - Ordering Rational Numbers 6.NS.C.7.A (Problem Set PSAGJ4)		   	2015-06-30 15:00:00
116 - Ordering Integers 6.NS.C.7.A (Problem Set PSAGGE)		   	2015-08-04 15:00:00
115 - Absolute Value 6.NS.B.7.C (Problem Set PSAHQ7)		   	2015-06-23 15:00:00
39 - Fractions to percent Skill Builder (Problem Set PSAQXWE)		   	All reassessment tests completed
41 - Expanded Notation Decimals 5.NBT.A.3a (Problem Set PSAGNVX)		   	All reassessment tests completed
46 - Rounding Decimal (Problem Set PSABH9R)		   	2015-07-27 15:00:00
38 - Fractions to Decimals Skill Builder (Problem Set PSAQXWC)		   	All reassessment tests completed

ASSISTments

ASSISTments

Student

Account

tess heilman (tessoh0912) [Logout](#)

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[Inbox](#)

[Need help?](#)

Level 2

Ms. Hagan

This is your default class

▼ Reassessment Tests

[Reassessment Test - 1407717](#)

Assigned: June 11, 2015 03:00 PM
Due on: June 15, 2015 11:00 PM

▼ Class Assignments

[Assignments Folder](#)

- 136 - Representing three-dimensional figures and finding surface area using nets (6.G.A.4) - Set B (Problem Set PSAFZMY) (Complete - 3/5, 60%) [Report](#)
- 135 - Finding the volume of rectangular prisms with fractional edge lengths (6.G.A.2) - Set A (Problem Set PSAER5W) (Complete - 3/5, 60%) [Report](#)
- 134 - 6.M.1 Concepts of Area and Perimeter (Problem Set PSAK8U) (Complete - 5/8, 62%) [Report](#)
- 133 - 6.M.6 Volumes and Surface Areas of Rectangular Prisms (Problem Set PSAK8Z) (Complete - 8/10, 80%) [Report](#)
- 132 - Finding the volume of rectangular prisms with fractional edge lengths (6.G.A.2) - Set B (Problem Set PSAFZNB) (Complete - 0/5, 0%) [Report](#)
- 131 - Representing three-dimensional figures and finding surface area using nets (6.G.A.4) - Set A (Problem Set PSAER53) (Complete - 3/5, 60%) [Report](#)
- 130 - Nets of 3D Figures 6.G.A.4 (Problem Set PSAGPQ) (Complete) [Report](#)
- 129 - Finding the Surface Area of a Rectangular Prism 6.G.A.4 (Problem Set PSAHS6) (Complete) [Report](#)

ASSISTments

Student/Problem --- [Unanonymize]	Average --- Data driven	PRA5P7V --- Data driven	PRA5P7W --- Data driven	PRA5P7X --- Data driven	PRA5P7Y --- Data driven	PRA5P7Z --- Data driven	PRA5P72 --- Data driven	Total Hints	Time Spent
Problem Average Graph	69%	92%	66%	61%	84%	50%	61%		
Common Wrong Answers			6.25,33% +feedback	137.2,35% +feedback		1.25,26% +feedback	93.86,41% +feedback		
Correct Answer(s)		187	16	7000	297	80	650		
XXXXXXXX	100%	✓ 187	✓ 16	✓ 7000	✓ 297	✓ 80	✓ 650	0	00:06:18
XXXXXXXX	50%	✓ 187	✗ 160	✗ 400	✓ 297	✓ 80	✗ 247	0	00:15:29
XXXXXXXX	17%	✓ 187	✗ Hint requested	✗ 134.4	✗ 2727	✗ 1.25	✗ 93.86	11	00:12:56
XXXXXXXX	100%	✓ 187	✓ 16	✓ 7000	✓ 297	✓ 80	✓ 650	0	00:10:26
XXXXXXXX	83%	✓ 187	✗ .16	✓ 7000	✓ 297	✓ 80	✓ 650	0	00:10:12
XXXXXXXX	33%	✓ 187	✗ 2560%	✗ 137.2	✓ 297	✗ 8	✗ 83.86	6	00:13:22
XXXXXXXX 2 DAYS LATE	50%	✓ 187	✗ 6.25	✓ 7000	✓ 297	✗ .8	✗ 93.86	4	00:14:15
XXXXXXXX	50%	✓ 187	✗ 1.6	✗ 6000	✓ 297	✓ 80	✗ 6.5	0	00:11:52

ASSISTments

Student Report - Assignment Details

Student: Jaden Hill

[View data in a given day](#)

Note: These actions are in chronological order. The quantities reported in seconds indicate elapsed time since the previous action.

BLUE: Answered correctly. RED: Answered incorrectly.

Assignment: 136 - Representing three-dimensional figures and finding surface area using nets (6.G.A.4) - Set B

Time	Action	Object ID / Input text
Tue May 19 11:38:56 -0400 2015	Started a problem	PRAQK9D
1 mins 19 secs	Asked for a hint	
2 mins 12 secs	Answered	33 square inches
Tue May 19 11:41:10 -0400 2015	Started a problem	PRAQK9E
0 mins 35 secs	Answered	314
Tue May 19 11:41:46 -0400 2015	Started a problem	PRAQK9F
1 mins 53 secs	Answered	96 square feet
Tue May 19 11:43:39 -0400 2015	Started a problem	PRAQK9G
2 mins 14 secs	Answered	\$54.00
2 mins 18 secs	Answered	\$45.00
2 mins 20 secs	Answered	\$67.50
Tue May 19 11:46:00 -0400 2015	Started a problem	PRAQK85
1 mins 19 secs	Answered	280

Technology Spotlights: Overview

Elementary Schools

One Minute Reader

Lexia

Symphony Math

Digital Passport

Technology Spotlights: Overview

Middle School

EcoMUVE

Operation Lapis

Google Earth

Read&Write for Google Docs

LearningAlly

ASSISTments

Technology Spotlights: Overview

High School

Visual Programming

Computer Science

The Wayland High School History Project

Multiple Levels

itslearning

Hour of code