## **Harvard Public Schools**

# Instructional Technology Report 2014-2017



## HARVARD PUBLIC SCHOOLS INSTURCTIONAL TEHCNOLOGY REPORT

2014 - 2016

\*Click on a section name or tab # to navigate to that section.

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## Acknowledgements

We wish to thank the following Technology Plan Committee members for their significant contributions in updating the 2014-2017 Technology Plan:

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## Executive Summary 2014 update

The Technology Plan Committee was appointed by the Harvard School Committee in November 2013 with the charge to review and update the 2011-14 Technology Plan for the Harvard Public Schools. Over the next six months, we met to examine the progress we have made over the last three years as well as to discuss next steps for the future. Clearly, there have been significant improvements in many areas as we met many of the items in the Vision and Mission Statements and recommendations from the previous plan as a result of increased funding: the upgrading of the network and computer labs, additional SmartBoards, iPads, in class computers, document cameras and related professional development. We also moved forward with increasing access and equity among both schools, expanding the curriculum, and increasing parent and community communication through the use of technology.

Our decisions related to the proposed purchases correlate with the need to align with the Common Core State Standards which incorporate specific technology expectations in Mathematics, Language Arts, Literacy, Social Studies, Science, and the Arts.

Once again, surveys of all stake holders were undertaken: parents, teachers, students, and for the first time, alumnae. We have shared a summary of those findings in our report and have reflected on them as we made recommendations for the next phase of our technology plan.

The committee had many rich discussions as we reached consensus on our new Vision and Mission Statements. The Technology Plan includes recommended purchases as well as the technology requirements aligned with the new Common Core Standards.

Our committee was committed to working towards providing both of our schools with the tools, curricula, and professional development to allow for the seamless inclusion of technology in classroom instruction and school management.

Respectfully submitted,

Gretchen Henry & Chris Boyle, co-chairs

Harvard Public Schools Technology Plan Committee



#### HARVARD PUBLIC SCHOOLS TECHNOLOGY PLAN 2014 - 2017

#### I. OVERVIEW

#### A. Technology Vision Statement

The Harvard Public School District will continue its commitment to excellence and will create a 21st century learning environment which prepares students for success in the digital age by providing:

- 1. Opportunities for students to achieve their highest potential through the provision of sufficient technology personnel, resources, and infrastructure.
- 2. The seamless inclusion of technology in classroom instruction as a tool for students to gain, demonstrate, and apply knowledge and understanding through authentic learning experiences.
- 3. The necessary ongoing training and support required to successfully implement technology-rich instruction and learning.

#### **B.** Mission Vision Statement

#### The Harvard Public Schools are committed to:

- 1. Offering students opportunities to share in the ownership and direction of their learning as responsible and contributing citizens in a rapidly changing world.
- 2. Ensuring technology hardware, software, and infrastructure are up-to-date within the guidelines of the District Replacement Cycle.
- 3. Providing teacher professional development and student training in the current and emerging technologies.
- 4. Providing a safe online learning environment as well as teaching and promoting digital citizenship.
- 5. Improving district coordination of websites, resources, communication and data.
- 6. Assessing the use of cloud-based applications in order to maximize accessibility, communication and collaboration while minimizing costs.

- 7. Providing sufficient technology personnel to support our vision.
- 8. Ensuring that teachers and students will utilize digital devices appropriately to enhance learning.
- 9. Meeting Technology Literacy Standards as imbedded in the Common Core Standards as well as the National Education Technology Standards for Students (NETS-S).
- 10. Preparing students to be successful with next generation assessments.

#### C. Goals

As in our previous 2011-14 Technology Plan, we will continue to commit to the original four goals along with the two additions (noted by asterisks) listed below as we move forward in meeting the ever-evolving updates and improvements in technology. All of our decisions are based on the acceptance of the National Education Technology Standards in the National Technology Plan as well as the MA State Common Core Standards.

Goal #1 All teachers in the Harvard Public Schools will have the professional development and support they need to help students learn using current and future instructional technology.

Goal #2 All students, teachers, and administrators will have access to state of the art technology in each classroom, lab, media center and administrative office.

Goal #3 Effective software and on-line learning resources will be made available for integration of technology to enhance and address the State and Common Core Standards and frameworks.

Goal #4 The Harvard Public Schools will continue to use technology to enhance communication with all members of the school and town community.

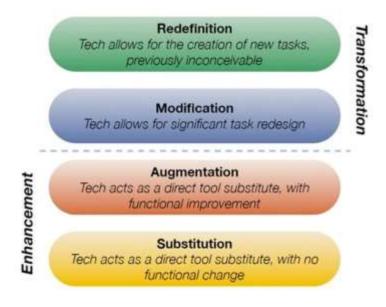
\*Goal # 5 The Harvard Public Schools will move toward a 1:World initiative (a technology device for each student, i.e. iPads) based on the SAMR (Substitution, Augmentation, Modification, Redefinition) model beginning with a grade 5 pilot with the financial, professional development, and staffing supports needed to be successful. The potential exists after a review to move forward with a 1:Word initiative K-12.

\*Goal # 6 We will make careful decisions that reflect our commitment to the SAMR model as illustrated on the next page.

#### D. Next Steps

As we move forward with the recommended hardware and software purchases in the 2014-17 Technology Plan as well as the planning and provision of related professional development, our committee will continue its commitment to the successful integration of technology prek-12 in instruction and learning in the following related areas:

- We will review and make recommendations for updates and changes in our technology curricula prek-12 to be fully aligned with the Common Core State Standards using Atas Rubicon (a curriculum mapping software).
- We will review and update our digital citizenship curriculum system-wide.
- We will review and update our Acceptable Use Guidelines system-wide.
- We will schedule and present parent and student information sessions beginning in May of this school year in preparation for a 1:World roll out in grade 5.
- We will provide on- going professional development for teachers in the iPad initiative as well as all faculty in both schools focused on the integration of technology in instruction and learning.
- We will administer and review quarterly surveys of students, parents and teachers on the
  progress of the first iPad initiative. As a result, adjustments will be made as needed.
  This information will also be used to make decisions as to the continuation of the 1 to
  World roll out in additional years.
- We will give updates to the School Committee during the school year to share the progress of the first iPad initiative.
- We will make decisions that reflect our commitment to the SAMR model below.



#### II. INFORMATION TECHNOLOGY ASSESSMENT

#### A. Current Program Status

#### 1. Curriculum Integration

Our focus is to improve on curriculum integration through the leadership of our administrators, media faculty, curriculum and team leaders all of whom facilitate the use of technology and integrate it into the curriculum. The following course descriptions (K-12) illustrate the objectives and skills incorporated within our Technology curriculum. See Tab 12 for complete scope and sequence.

#### 2. Course Offerings

#### **Hildreth Elementary School (K-5)**

Currently at the K-5 level, students attend a Library Media Technology Class as a forty-minute special once or twice a week. In a three-week rotation, students attend a class for skills instruction in the computer lab twice and library skills in the library once. Kindergarten and First Grade computer skills instruction involves learning how to manipulate the mouse and keyboard, basic computer vocabulary and navigating preselected websites incorporating different aspects of classroom curriculum. Second Grade – Fifth Grade computer skills instruction involves keyboarding, computer vocabulary and navigating the pre-selected websites incorporating different aspects of classroom curriculum. Students begin Microsoft productivity tools using Word, Excel and Power Point. Currently, similar skills are being taught at each these levels. In the future, as students are receiving more formal instruction, the grade level skills will differentiate.

#### The Bromfield School (6-12)

Media Technology	(Grades K-5)
Flash Animation/Web Design	(Grades 9-12)
CADD (Computer Aided Drafting and Design)	(Grades 9-12)
Computer Technology	(Grades 6-8)
Computer Graphics	(Grades 9-12)
Introduction to Computer Science	(Grades 10-12)
Creative Digital Photography	(Grades 9-12)

#### **Computer Technology Grade 6**

Students will be introduced to the history of the computer, its many uses, and components. In addition, students will develop competency using basic computer tools to support important skills for work in other academic subjects.

- A keyboarding program will be used to practice proper keyboarding techniques.
   These skills will be applied to all course work and emphasized throughout the year.
- Students will work with the Microsoft Office Suite, including Word, PowerPoint, Excel and Publisher.
- Safe and effective strategies for using the Internet and school network will be incorporated into projects.

Many assignments will be curriculum based, directly supporting content in the core academic areas.

#### **Computer Technology Grade 7**

Students will expand their knowledge of computing tools, and continue to develop mastery level skills in some areas. Students will:

- Use word processing to create a variety of print projects.
- Design spreadsheets and databases.
- Create charts and graphs to present data.
- Understand and apply HTML to create web pages.
- Develop presentations.
- Introduce electronic mail as an efficient communications tool.
- Demonstrate safe and effective methods for using the Internet including critical analysis of content, and ethics related to copyright and plagiarism.

In addition, students will explore the basic operating components of a computer as well as some history about the rapid development of computer technology and its impact on society.

#### **Computer Technology Grade 8**

This class offers students opportunities to apply their expanding technological skills to more complex projects. Applications using HTML and programs such as Inspiration and Publisher will also be part of the class projects which are integrated into grade level curriculum. Students will create web pages and publications that integrate photo, images, and language. Research on the Internet will continue to emphasize how to use search engines effectively to find relevant, unbiased and current information on a subject.

#### **Computer Graphics (Grades 9-12)**

This design course is project based with individual instruction.

Emphasis will be on developing skills necessary for the comfortable and effective use of the computer to create art. Students will use the basics of color and composition theory to create fine art, magazine layouts, advertisements, and desktop publishing projects. Software will include Adobe Illustrator and Adobe Photoshop. Students will also have the opportunity to integrate projects from other courses into Computer Graphic projects.

Grading will concentrate on effort and not artistic ability.

#### Flash Animation/Web Design (Grades 9-12)

This art course is project based with individual instruction.

In this course students use Adobe Flash, Photoshop, and Illustrator to design web pages and to create graphics and animations for web page design, as well as free standing animations.

The focus of this class is on the design elements of shape, color, texture, typography, and images as they are applied to web pages (not just bells and whistles!). Students will work on projects that integrate elements such as buttons, navigation bars, and background images as well as animation to communicate creative visual information.

Grading will concentrate on effort and not artistic ability.

#### **CADD (Computer Aided Drafting and Design) (Grades 9-12)**

This design course is project based. It is an introduction to the basic functions and applications of the PC as a tool of design, emphasis will be on developing skills necessary for the comfortable and effective use of the computer for creating technical and architectural drawings using the software, AutoCAD LT. The focus for the second semester will be on architectural design and will culminate with construction of a scaled model.

Grading will concentrate on effort and not artistic ability.

#### **Creative Digital Photography (Grades 9-12)**

This art course is project based with individual instruction.

Students will study digital photographic and editing techniques using Adobe Photoshop. Topics will include artistic composition, resolution, lighting, printing, mounting, and display. Projects will reflect themes and/or artistic techniques.

Grading will concentrate on effort and not artistic ability.

#### **Introduction to Computer Science (Grades 10-12)**

This course is an introductory class in programming. Students will learn computer hardware basics, the history of computers, and how to use the JAVA programming language. A focus in the second semester will also be the development of mobile applications using JAVA.

#### Virtual High School (Grades 9-12)

The Harvard Public Schools have a contract with Virtual High School regarding distance learning for The Bromfield School. Funding is provided by the omnibus budget. Students are currently enrolled in the following courses:

#### Introduction to Economics

Reinforce crucial academic skills to help students strengthen their background in the subject area prior to taking an advanced level course.

#### Animation and Effects

Students will develop the skills to create simple cartoon animations, interactive buttons, and other 2D and 3D dynamic graphics.

#### Preparing for College Admissions

In this course we will investigate in as much detail as possible what is involved with pursuing a post secondary education.

#### Modern Middle East

This course explores the history of the Middle East (focusing primarily on the last century), and examines the relationships within the region and beyond.

#### Russian Language & Cultural

Learn the basics of Russian language and culture.

#### Entrepreneurship

Entrepreneurship starts to prepare future small business owners to run their own business according to the principles of business.

#### AP US History

This is a college level history course designed to meet the needs of highly motivated students who have a strong interest and ability in history.

#### **AP World History**

This is a college level history course designed to meet the needs of highly motivated students who have a strong interest in history.

#### **AP Music**

This course is designed to give the student an understanding of music theory, sight reading and aural skills that is equivalent to that of a first year college music student.

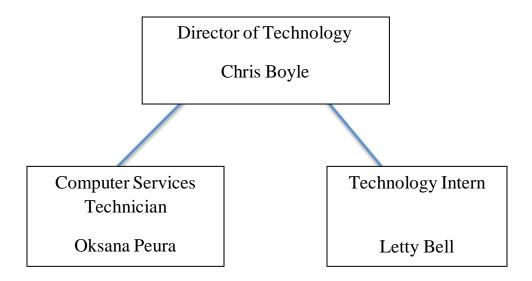
In addition one student has dual enrollment in Greenfield Community College taking courses in Principals of Psychology, Music Theory Fundamental, Creative Musicianship, Applied Music and English Composition. Another student has dual enrollment with High Mountain Institute of Colorado taking courses in Practices and Principles: Ethics of Natural World, Literature of Natural World, Natural Science, AP Calculus A, and United States History.

#### 3. Staffing and Training

All teachers and administrators are provided with email accounts accessible from any internet based computer. Extensive training has been provided for the majority of teachers who have SMARTboards and other presentation hardware and software in their classroom. Advanced training has been offered over each of the last three years as well as additional staff members participating in related courses and workshops.

Our Technology Department staffing includes a Director of Technology, Computer Support Specialist, and a Technology Intern through a partnership with Fitchburg State University. We also have a library media technology specialist and a certified library aid at HES, a library media specialist at TBS as well as faculty who teach a variety of technology courses at The Bromfield School.

#### **Department of Technology Staffing**



## **Technology Faculty**

## **Hildreth Elementary School**

Mary-Elizabeth Cregan

Marybeth Quaadgras

#### The Bromfield School

Martha Brooks

Cricket Segaloff

Keith Lavigne



#### **Summary of Survey Results**

#### Students at TBS (153)

The majority of participants were middle schools students who took Computer Tech as a choice for one of their specials.

- A. 99.34 % had internet at home as well as at least 3 technology devices.
- B. 81% had no restrictions as to their use of technology at home.
- C. 69% use technology daily for 1-3 hours.
- D. 61% use technology for homework for less than an hour.
- E. 96% have little or no supervision when on line.
- F. 70-80% were satisfied with the number of computers & printers at school in the labs, but wanted laptops and tablets as there was only one computer in most classrooms.
- G. They usually used other students or teachers for help with technical problems.
- H. Students felt most capable with using Word, PowerPoint, SmartBoards, videos, social media, and on line games.
- I. 71 % felt technology was used in class a few times to daily each week.
- J. They used technology to produce projects, work collaboratively or for writing and internet research.
- K. They were interested in digital imagery, robotics and programming for future courses.
- L. Suggestions for improvements were: faster internet, iPads, laptops, less restrictions on website, and new computers for the front of the library.

#### Parent Surveys (205)

- A. Participants: prek-2 58, gr 3-5 73, gr 6-8 66, gr 9-12 95 with 99% having access to the internet at home.
- B. Technology at home was laptops, smartphones, desk tops, iPad/tablets.
- C. 69 % had some restrictions at home re: technology.
- D. 77 % of their children were using technology daily.
- E. 62% thought their children had enough access to technology at school.
- F. 99.5% believe that technology can be a useful educational tool.
- G. 94 % of parents felt fairly to very comfortable helping their children navigate technology devices for academic use.
- H. 86% supported the district participating in a 1 to world technology limited pilot.

#### Alumnae (34 contacted through social media)

- A. Almost all had taken computer tech in middle school.
- B. Suggestions for additional courses at TBS: Programing & coding, video making & editing, Web design, Excel.
- C. 84% thought they were fairly to well- prepared in technology at TBS.
- D. There was a much higher use of technology in college than at high school.
- E. BlackBoard, Moodle, and Google were the most common tools used for communication in college.
- F. Their recommendations for the most beneficial technology to add to TBS: Coding/ programming, Moodle, an online site for assignments & grades, Piazza as a discussion forum, Adobe Creative Cloud.

#### Teachers (32 HES, 57 TBS)

- A. 84 % felt the Professional Development options met their needs fairly well to completely.
- B. 75% use our IT staff for support.
- C. 93% felt their needs were met by our IT staff
- D. 75% were OK with how their computers functioned but felt they were older.
- E. 51 % thought there was not an adequate number of computers.
- F. The most used technology in class was: SmartBoards & projectors, Web based activities and iPads ( already one for each teacher at HES).
- G. The most requested additional technology: iPads and laptop carts.
- H. The most requested PD: SmartBoards, iPads, Integrating technology, Google drive, Wikis, Moodle.
- I. 99% of teachers had internet at home.



#### Research Summary

In order to make informed decisions, our committee reviewed many articles and technology plans from other districts. We also had a team of teachers from both schools make a site visit to the Shrewsbury Middle School which is in year 3 of their 1:World Initiative. Our committee's research findings were posted on our Google Drive so all members had the opportunity to read or edit them at school or at home. The research was most useful as it not only shared a variety of schools' original successes and missteps along with thoughtful reflection and advice, but there was data indicating significant positive results in several critical areas for students including increased engagement, supported personalized learning, improved outcomes, improved collaboration, and increased motivation. The research also outlined positive outcomes for teachers such as access to Common Core State Standards aligned materials and relevant research, expanded repertoire of instructional tools and student learning options. It was clear that a strong infrastructure, on- going teacher professional development, available staffing supports and home/school communication were critical to success.

#### Planning and Implementation Resources

- 1. <a href="https://..piktochart.com/output/815188-6\_steps\_pilot">https://..piktochart.com/output/815188-6\_steps\_pilot</a> (Sudbury)
- 2. http://learninginsudbury.com/11-resources/initial-pilot-proposal-report/ (Sudbury)
- 3. <a href="https://drive.google.com/a/shrewsbury.k12.ma.us/#folders/0B26">https://drive.google.com/a/shrewsbury.k12.ma.us/#folders/0B26</a> pSeMIE1VZ0lk QV83OEtvMEk (Shrewsbury)
- 4. <a href="https://drive.google.com/file/d/0B26\_pSeMIE1VUIVIWTRXbGw0ZmM/edit?usp\_sharing">https://drive.google.com/file/d/0B26\_pSeMIE1VUIVIWTRXbGw0ZmM/edit?usp\_sharing</a> (Shrewsbury)
- 5. eSchool News http://www.eschoolnews.com Here is why we absolutely need ed-tech
- 6. edutopia <u>www.edutopia</u>. org/blog 6 Things we Know for Sure with iPads in School
- 7. Edudemic <u>www.edudemic.com/student-choice/</u> The Value of Student Choice in Connected Classrooms



Recommended Items	Common Core State Standards Math	Common Core State Standards ELA		
Wireless completion for 100% coverage	Guiding Principle 4: Equity-All students should have the benefit of quality instructional materials, good libraries, and adequate technology.	Guiding Principle 3-An effective English language arts and literacy curriculum draws on informational texts and multimedia in order to build academic vocabulary and strong content knowledge.		
mac Mini with OSX server for data caching	Guiding Principle 3: Technologycomputers with appropriate software, if properly used, contribute to a rich learning environment for developing and applying mathematical concepts.	Students use technology and digital media strategically and capably.		
iPads for TBS staff (includes cases, 10 Apple TVS, apple care - LEASE)	Guiding Principle 3: Technologycomputers with appropriate software, if properly used, contribute to a rich learning environment for developing and applying mathematical concepts.	Guiding Principle 3-An effective English language arts and literacy curriculum draws on informational texts and multimedia in order to build academic vocabulary and strong content knowledge.		
iPad air cart for TBS includes cart & Macbook	Standards for Mathematical Practices: Technology is an essential tool to be used strategically.	Integration of Knowledge and Ideas: Evaluate the advantages and disadvantages of using different mediums to present a particular topic or idea.		
Bromfield iPad apps	Technology is an essential tool to be used strategically.	Presentation of Knowledge and Ideas: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.		
Smart responders class set for English dept.	Guiding Principle 6: Assessment of student learning should take many forms to inform instruction and learning.	Speaking and Listening Standards 6 - 12: Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.		
Smart responders alphanumeric for science	Assessment of student learning should take many forms to inform instruction and learning.	Speaking and Listening Standards 6 - 12: Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.		
SmartBoard for World Lang. Classroom	Guiding Principle 1: Learning: Math ideas should be explored in ways that stimulate curiousity, create enjoyment of math, and develop depth of understanding.	Speaking and Listening Standards 6 - 12: Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.		
SmartBoard for TBS Music	Guiding Principle 1: Learning: Math ideas should be explored in ways that stimulate curiousity, create enjoyment of math, and develop depth of understanding.	Speaking and Listening Standards 6 - 12: Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.		
laptop Music	Use appropriate tools strategically.	College and Career Readiness: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.		
Deskop- Music SmartMusic Stations (inlcudes Mics and foot pedals)	Use appropriate tools strategically.	Presentation of Knowledge and Ideas: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.		

	Guiding Principle 2: Teaching: An effective program is based on a	
	carefully designed set of content standards that are clear and	Presentation of Knowledge and Ideas: Make strategic use
	specific, focused and articulated over time as a coherent	of digital media and visual displays of data to express
SmartMusic Software - Teacher	sequence.	information and enhance understanding of presentations.
		College and Career Readiness: Use technology , including
	Ideas should be explored in ways that stimulate curiousity, create	the Internet, to produce and publish writing and to
SmartMusic Software - Student	enjoyment and develop depth of understanding.	interact and collaborate with others.
		Integration of Knowledge and Ideas: Integrate and
		evaluate multiple sources of information presented in
		diverse formats and media in order to address a questions
Graphing Calculators and software - TBS math	Use appropriate tools strategically.	or solve a problem.
A.Wand Daving Dilat Conda E (includes access A small TVs A	Ideas should be sometimed in the state at insulate somiconity, success	Career and College Readiness: Students employ
1:World Device Pilot, Grade 5 (includes cases, 4 apple TVs, 1	Ideas should be explored in ways that stimulate curiousity, create	technology thoughtfully to enhance their reading, writing,
instructional computer, and apple care) (LEASE)	enjoyment and develop depth of understanding.	speaking, listening, and language use.
1:World Device Pilot, Additional Grade Level	Ideas should be explored in ways that stimulate curiousity, create enjoyment and develop depth of understanding. Equity: All	Career and College Readiness: Students employ
		technology thoughtfully to enhance their reading, writing,
(includes cases, 4 apple TVs, 1 instructional computer, and	students should have a high quality program that prepares them	
apple care) (LEASE based on YEAR 1 pilot outcome)	for college and career.	speaking, listening, and language use.  Career and College Readiness: Students employ
1:World Device Pilot, Additional Grade Level	Ideas should be evalored in ways that stimulate surjective greats	
(includes cases, 4 apple TVs, 1 instructional computer, and	Ideas should be explored in ways that stimulate curiousity, create	technology thoughtfully to enhance their reading, writing,
apple care) (LEASE based on YEAR 1 pilot outcome)	enjoyment and develop depth of understanding. Equity.	speaking, listening, and language use. Integration of Knowledge and Ideas: Evaluate the
		advantages and disadvantages of using different mediums
Now iPade for Nurses Librarian Administration	Use appropriate tools strategically	to present a particular topic or idea.
New iPads for Nurses, Librarian, Administration Battery Packs	Use appropriate tools strategically.  Use appropriate tools strategically.	to present a particular topic or idea.
Battery Packs	Technology is an essential tool to be used strategically. Ideas	Integration of Knowledge and Ideas: Integrate visual
	should be explored in ways that stimulate curiousity, create	information with other information in print and digital
Professional Development for teachers and adminsitrators.	enjoyment and develop depth of understanding.	texts.
Troicssional bevelopment for teachers and administrators.	Conceptual Category: Modeling - Diagrams of various kinds,	ICAG.
	spreadsheets and other technology, and alegebra are powerful	Presentation of Knowledge and Ideas: Make strategic use
	tools for understanding and solving problems drawn from different	of digital media and visual displays of data to express
Apps for Piloting Groups	types of real-world situations.	information and enhance understanding of presentations.
7-pps for Fiedding Groups	cypes of reac works steaderons.	Presentation of Knowledge and Ideas: Make strategic use
		of digital media and visual displays of data to express
Projector for TBS Library and screen	Use appropriate tools strategically.	information and enhance understanding of presentations.
Trojector for 120 2.51 ary and server	Guiding Principle 4: Equity-All students should have the benefit of	Presentation of Knowledge and Ideas: Include multimedia
	quality instructional materials, good libraries, and adequate	components and visual displays in presentations to clarify
Large screen tvs	technology.	claims and findings and emphasize salient points.
		Presentation of Knowledge and Ideas: Make strategic use
		of digital media and visual displays of data to express
Mimo pad - TBS math	Use appropriate tools strategically.	information and enhance understanding of presentations.
·	Conceptual Category: Modeling - Diagrams of various kinds,	,
	spreadsheets and other technology, and alegebra are powerful	
	tools for understanding and solving problems drawn from different	
	types of real-world situations.	Presentation of Knowledge and Ideas: Include multimedia
	Assessment of student learning should take many forms to inform	components and visual displays in presentations to clarify
TTI 84 projector & CB motion data collector	instruction and learning.	claims and findings and emphasize salient points.

	Guiding Prinicipal for Langauge Arts and Literacy
Guiding Principal for Mathematics in Massachusetts	Programs in Massachusetts
Technology is an essential tool that should be used strategically in	They use technology and digital media strategically and
mathematics education.	capably.Students employ technology thoughtfully to
Technology enhances the mathematics curriculum in many ways.	enhance their reading, writing, speaking, listening, and
Tools such as measuring instruments, manipulatives (such as base	language use. They tailor their searches online to acquire
ten blocks and fraction pieces), scientific and graphing	useful information efficiently, and they integrate what
calculators, and computers with appropriate software, if properly	they learn using technology with what they learn offline.
used, contribute to a rich learning environment for developing	They are familiar with the strengths and limitations of
and applying mathematical concepts.	various technological tools and mediums and can select
	and use those best suited to their communication goals.
Teachers and students should consider the available tools when	
presenting or solving a problem. Students should be familiar with	
tools appropriate for their grade level to be able to make sound	
decisions about which of these tools would be helpful. (See	
Standard for Mathematical Practice 5: Use appropriate tools	
strategically.)	
Technology enables students to communicate ideas within the	
classroom or to search for information in external databases such	
as the Internet, an important supplement to a school's internal	
library resources. Technology can be especially helpful in assisting	
students with special needs in regular and special classrooms, at	
home, and in the community.	



Infastructure, Hardware, and Software to Support Identified Needs

		Year 1	,		Year			i idenimied iteeds
Item & Description	qty	cost	total	qty		total	Acct Total	Narrative
nem & Description	qıy	COSI	ioidi					Nulluive
		1		Inf	astructure	Technolog	y - District	T
Wireless	1	\$30,492	\$30,492					To obtain 100% coverage and to increase density needed based on proposed 1:World
Mac mini w/ OS X server	1	\$1,306	\$1,306					Provide data caching for iPads to reduce internet bandwidth during App updates and installations
							\$31,798	
New Equipment - Technology District	1 /	¢500	62.500					Description and appropriate of the second se
New iPads for Nurses, Librarian, Administration	6	\$598	\$3,588					iPads for enhanced professional use
							\$3,588	
New Equipment - Technology Bromfield		ı					40,000	
								25 student iPads per cart; used for mobile lab instruction and learning
iPad Carts (LEASE)	3	\$6,400	\$19,200	3	\$6,400	\$19,200		environment.
staff iPads (70 with apple tv and cases)(LEASE)	1	\$15,097	\$15,097	1	\$15,097	\$15,097		Assigned to classroom teachers to be used professionally or for student use
Smart responders class set for English dept.	1	\$2,500	\$2,500					Student assesment tools for instant feedback and data gathering
Smart responders alphanumeric for science	1	\$1,800	\$1,800					Student assesment tools for instant feedback and data gathering
SmartBoard for World Lang. Classroom	2	\$4,000	\$8,000					Interactive learning for World Language students
SmartBoard for TBS Music	1	\$4,000	\$4,000					Interactive learning for Music students
Laptop Music	-	\$1,200	\$1,200					Teacher station for SmartMusic and Finale software
Deskop- Music SmartMusic Stations (inlcudes Mics and foot pedals)	2	\$905	\$1,810					Dedicated music stations for student intstrument/vocal practice
and root pedals)		Ψ700	ψ1, <b>010</b>					Used in AP Calculus, AP Statistics, Calculus, Algebra 1 and 2, and many other
Graphing Calculators and software	30	\$125	\$3,750					math classes
Projector for TBS Library and screen	1	\$1,200	\$1,200					Allow more interactive instruction in the front lab of the library
Large screen tvs	1	\$500	\$2,000					TV's for viewing of educational videos
	1		-					
Mimo pad - TBS math		\$350	\$350					Allow for interactive teaching and learning in math
TTI 84 projector & CB motion data collector	1	\$400	\$400				205 / 04	Allow for data analysis and viewing using a TI 84 Calucator
							\$95,604	
New Equipment - Technology Hildreth  1:World Device Pilot, Grade 5 (includes cases, 4								
apple TVs, 1 instructional computer, and apple care) (LEASE)	1	\$23,306	\$23,306	1	\$23,306	\$23,306		Learning tool to increase student's motivation, innovation, collaboration, and or
1:World Device Pilot, Grade TBD (includes cases, 4		<b>4</b> -0,000	4=0,000		4-0,000	4=0,000		
apple TVs, 1 instructional computer, and apple								
care) (LEASE)				1	\$23,306	\$23,306		Learning tool to increase student's motivation, innovation, collaboration, and or
							\$69,918	
Computer Software - Instructional Bromfield								
Apps for Bromfield Staff	1	\$500	\$500					Allow purchase of teaching apps for Bromfield iPads
								Management of SmartMusic software allowing for assigment creation and
								delivery to students, document and grade student progress, individualize
SmartMusic Software - Teacher	1	\$140	\$140					student learning
								Student practice tool for woodwind, brass, percussion, string, and vocal
		¢ 40	***					musicians. Provides self assement, instant feedback from software to focus
SmartMusic Software - Student		\$40	\$80					students on areas of improvement
	1	-						
	1 1						\$720	
Computer Software - Instructional Hildreth		I						•
								Allow purchase of teaching and learning apps for teachers and students of the
Apps for Piloting Groups	1	\$400	\$400	\$1	\$400	\$400		1:World Pilot
	igsqcut							
							\$400	
Misc Items/PD - District		1			1			Territoria de la compansión de la compan
Datta v Baska	10	<b>#</b> 00	****	10	00	***		Charging batteries to ensure continued instructional and learning use of iPads
Battery Packs	10	\$80	\$800	10	80	\$800		_during the day

PD Teacher	1	\$5,000	\$5,000	1	\$5,000	\$5,000		Provide continued Professional DevelopIment to faculty to enhance instruction with technology
							\$11,600	
Grand Total							\$213,628	

#### **Year 3 Technology Purchases**

While this tech plan covers two years, the leases that are being proposed are for 3 years. It may also be decided that if the pilot programs are successful we will begin implementation of the 1:World for all grade levels 5-12.

The 3rd year costs are as follows:

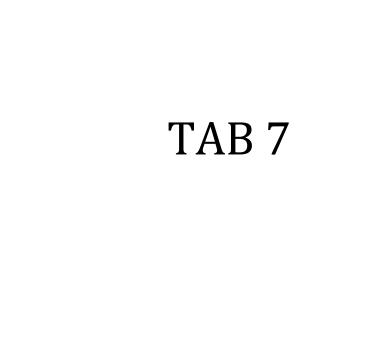
iPad Carts (LEASE)	3	\$6,400	\$19,200
staff iPads (70 with apple tv			
and cases)(LEASE)	1	\$15,097	\$15,097
1:World Device Pilot, Grade			
5 (includes cases, 4 apple			
TVs, 1 instructional			
computer, and apple care)			
(LEASE)	1	\$23,306	\$23,306
1:World Device Pilot, Grade			
TBD (includes cases, 4			
apple TVs, 1 instructional			
computer, and apple care)			
(LEASE)	1	\$23,306	\$23,306
1:World Device			
Implementation all grades			
(LEASE)	6	\$28,000	\$168,000

This represents an annual cost in order to maintain leases. Suggested funding sources:

1) \$50,000 from Omni-Bus budget made available due to no longer needed replacements.

2) \$200,000 from Omni-Bus budget and/or

Yr 3 total: \$248,909 outside funding sources.



## Massachusetts Curriculum Framework

#### **FOR**

## **MATHEMATICS**

#### Page 10:

**Guiding Principle 3: Technology** 

Technology is an essential tool that should be used strategically in mathematics education.

Technology enhances the mathematics curriculum in many ways. Tools such as measuring instruments, manipulatives (such as base ten blocks and fraction pieces), scientific and graphing calculators, and computers with appropriate software, if properly used, contribute to a rich learning environment for developing and applying mathematical concepts. However, appropriate use of calculators is essential; calculators should not be used as a replacement for basic understanding and skills. Elementary students should learn how to perform the basic arithmetic operations independent of the use of a calculator. Although the use of a graphing calculator can help middle and secondary students to visualize properties of functions and their graphs, graphing calculators should be used to enhance their understanding and skills rather than replace them.

Teachers and students should consider the available tools when presenting or solving a problem.

Students should be familiar with tools appropriate for their grade level to be able to make sound decisions about which of these tools would be helpful. (See Standard for Mathematical Practice 5: *Use appropriate tools strategically.*)

Technology enables students to communicate ideas within the classroom or to search for information in external databases such as the Internet, an important supplement to a school's internal library resources. Technology can be especially helpful in assisting students with special needs in regular and special classrooms, at home, and in the community.

Technology changes the mathematics to be learned, as well as when and how it is learned. For example, currently available technology provides a dynamic approach to such mathematical concepts as functions, rates of change, geometry, and averages that was not possible in the past. Some mathematics becomes more important because technology requires it, some becomes less important because technology replaces it, and some becomes possible because technology allows it.

## Guiding Principle 4: Equity Page 11:

...

All students should have the benefit of quality instructional materials, good libraries, and adequate technology. All students must have the opportunity to learn and meet the same high standards. In order to meet the needs of the greatest range of students, mathematics programs should provide the necessary intervention and support for those students who are below or above grade-level expectations. Practice and enrichment should extend beyond the classroom. Tutorial sessions, mathematics clubs,

<sup>&</sup>lt;sup>1</sup> National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context.* Accessed June 2000.

competitions, and apprenticeships are examples of mathematics activities that promote learning.

The Standards for Mathematical Practice Page 16:

#### 5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software.

Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content <u>Page 17:</u>

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word "understand" are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

## The Standards for Mathematical Content

PRE-KINDERGARTEN-GRADE 8

Page 67:

Grade 8

Expressions and Equations

8.EE

Work with radicals and integer exponents.

4. Perform operations with numbers expressed in scientific notation, including problems where both

decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

## The Standards for Mathematical Content

HIGH SCHOOL: CONCEPTUAL CATEGORIES

#### Introduction

Numbers and Number Systems

#### Page 75:

. . .

Calculators, spreadsheets, and computer algebra systems can provide ways for students to become better acquainted with these new number systems and their notation. They can be used to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

. . .

#### Introduction

**Expressions** 

#### Page 79:

. . .

A spreadsheet or a computer algebra system (CAS) can be used to experiment with algebraic expressions, perform complicated algebraic manipulations, and understand how algebraic manipulations behave.

Content Standards

Arithmetic with Polynomials and Rational Expressions

A-APR

#### Page 82:

#### Rewrite rational expressions.

Rewrite simple rational expressions in different forms; write a(x) = b(x) in the form a(x) = b(x), where a(x), b(x), a(x), and a(x) are polynomials with the degree of a(x) less than the degree of a(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.

Reasoning with Equations and Inequalities

A-REI

#### Page 83:

#### Solve systems of equations.

9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 × 3 or greater).

## Represent and solve equations and inequalities graphically. Page 84:

Explain why the *x*-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions. 2\*\*

Conceptual Category: Functions

#### Page 85

Connections to Expressions, Equations, Modeling, and Coordinates

Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value for the same input lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

#### Interpreting Functions

F-IF

Page 87:

#### Analyze functions using different representations.

7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. \*\*

#### **Building Functions**

F-BF

Page 88:

#### Build new functions from existing functions.

3. Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include* recognizing even and odd functions from their graphs and algebraic expressions for them.

<sup>&</sup>lt;sup>2</sup>\*\* indicates Modeling standard.

## <u>Construct and compare linear, quadratic, and exponential models and solve problems.</u> <u>Page 88:</u>

4. For exponential models, express as a logarithm the solution to  $ab^{ct} = d$  where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.\*\*

#### Trigonometric Functions

F-TF

#### Page 89:

#### Model periodic phenomena with trigonometric functions.

7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.\*\*

#### CONCEPTUAL CATEGORY: Modeling

[«]

#### Page 90:

#### Introduction

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

. . .

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

#### Page 91:

. . .

Graphing utilities, spreadsheets, computer algebra systems, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

#### CONCEPTUAL CATEGORY: Geometry

[G]

#### Page 92:

#### Introduction

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

. . .

#### CONCEPTUAL CATEGORY: Statistics and Probability

[S]

Page 98:

#### Introduction

. . .

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

#### **Content Standards**

Interpreting Categorical and Quantitative Data \_

S-ID

Page 100:

#### Interpret linear models.

8. Compute (using technology) and interpret the correlation coefficient of a linear fit. \*\*

## The Standards for Mathematical Content

## **HIGH SCHOOL:**

MODEL PATHWAYS AND MODEL COURSES

MODEL TRADITIONAL PATHWAY: Model Algebra I

Page 113:

#### Represent and solve equations and inequalities<sup>3</sup> graphically.

Explain why the *x*-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions. \*\*

#### Page 114:

Analyze functions<sup>4</sup> using different representations.

 $<sup>^{3}</sup>$  In Algebra I, functions are limited to linear, absolute value, and exponential functions for this cluster.

7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. 5\*\*

#### **Building Functions**<sup>6</sup>

F-BF

#### Build new functions from existing functions.

3. Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.* 

#### **Statistics and Probability**

Interpreting Categorical and Quantitative Data \_

S-ID

#### Page 115:

#### Summarize, represent, and interpret data on a single count or measurement variable.

4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. ★★<sup>7</sup>

#### Interpret linear models.

8. Compute (using technology) and interpret the correlation coefficient of a linear fit. \*\*

## MODEL TRADITIONAL PATHWAY: Model Algebra II

Arithmetic with Polynomials and Rational Expressions

A-APR

#### Page 126:

#### Rewrite rational expressions.

Rewrite simple rational expressions in different forms; write a(x) / b x in the form a(x) + a(x) / b x, where a(x), a(x), and a(x) are polynomials with the degree of a(x) less than the degree of a(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.

#### Reasoning with Equations and Inequalities

A-REI

#### Page 126:

#### Represent and solve equations and inequalities graphically.

Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.  $\star$ 

#### **Building Functions**

F-BF

#### Page 127:

<sup>&</sup>lt;sup>4</sup> In Algebra I, only linear, exponential, quadratic, absolute value, step, and piecewise functions are included in this cluster.

<sup>&</sup>lt;sup>5</sup>\*\* indicates Modeling standard.

<sup>&</sup>lt;sup>6</sup> Functions are limited to linear, quadratic, and exponential in Algebra I.

<sup>&</sup>lt;sup>7</sup> Introduce in Algebra I; expand in Algebra II.

#### Build new functions from existing functions.

3. Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.* 

#### Linear, Quadratic, and Exponential Models

F-LE

#### Page 127:

#### Construct and compare linear, quadratic, and exponential models and solve problems.

4. For exponential models, express as a logarithm the solution to ab = d where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.  $\star \star$ 

#### Model Integrated Pathway: Model Mathematics I

#### Reasoning with Equations and Inequalities

A-REI

#### Page 133:

#### Represent and solve equations and inequalities graphically.8

Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

#### **Functions**

#### Interpreting Functions

F-IF

#### Page 133:

#### Analyze functions using different representations. 10

- 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. ★★
  - a. Graph linear and quadratic functions and show intercepts, maxima, and minima. ★★
  - e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. ★★

#### **Building Functions**

F-BF

#### Page 134:

#### Build new functions from existing functions. 11

3. Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

#### **Statistics and Probability**

#### Interpreting Categorical and Quantitative Data

S-ID

#### Page 136:

#### Interpret linear models.

8. Compute (using technology) and interpret the correlation coefficient of a linear fit. \*\*

Elimit Mathematics I to linear and exponential equations; learn as general principle to be expanded in

<sup>8</sup> Mathematics II and III.

<sup>&</sup>lt;sup>9</sup>★★ indicates Modeling standard.

<sup>&</sup>lt;sup>10</sup> Limit Mathematics I to linear and exponential functions with integer domains.

<sup>&</sup>lt;sup>11</sup> Limit Mathematics I to linear and exponential functions; focus on vertical translations for exponential functions.

#### Model Integrated Pathway: Model Mathematics II

#### **Functions**

Interpreting Functions \_ F-IF
Page 142:

Analyze functions using different representations. 12

- 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. \*
  - a. Graph linear and quadratic functions and show intercepts, maxima, and minima. ★★
  - b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. ★★

**Building Functions** 

F-BF

Page 142:

Build new functions from existing functions. 13

3. Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

#### Arithmetic with Polynomials and Rational Expressions

A-APR

Page 151:

Rewrite rational expressions. 14

Rewrite simple rational expressions in different forms; write a(x) = a(x) b(x), where a(x), b(x), and b(x) are polynomials with the degree of b(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.

#### Reasoning with Equations and Inequalities

A-REI

Page 151:

Represent and solve equations and inequalities graphically.

Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

<sup>12</sup> Limit Mathematics II to linear, exponential, quadratic, piecewise-defined, and absolute value functions.

<sup>&</sup>lt;sup>13</sup> Expand to include quadratic and absolute value functions.

<sup>&</sup>lt;sup>14</sup> Focus on linear and quadratic denominators.

#### **Functions**

Interpreting Functions F-IF

#### Page 152:

#### Analyze functions using different representations. 15

- 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. 16\*\*
  - b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. ★★
  - c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. ★★
  - e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. «

**Building Functions** F-BF

#### Page 152:

#### Build new functions from existing functions. 17

Identify the effect on the graph of replacing f(x) by f(x) + k, kf(x), f(kx), and f(x + k) for specific 3. values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

#### Linear, Quadratic, and Exponential Models

F-LE

#### Page 152:

#### Construct and compare linear, quadratic, and exponential models and solve problems.<sup>18</sup>

For exponential models, express as a logarithm the solution to  $ab^{ct} = d$  where a, c, and d are 4. numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.  $\star$ 

#### Statistics and Probability

Interpreting Categorical and Quantitative Data

S-ID

#### Page 153:

#### Summarize, represent, and interpret data on a single count or measurement variable.

Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate 4. population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. ★ ★

<sup>16</sup>(+) indicates standard beyond College and Career Ready.

<sup>15</sup> Expand to include rational and radical functions; focus on using key features to guide selection of appropriate type of function model.

<sup>&</sup>lt;sup>16</sup>\*\* indicates Modeling standard.

Expand to include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types.

<sup>&</sup>lt;sup>18</sup> Only include logarithms as solutions of exponential functions.

#### Model Advanced Course: Model Precalculus

#### **Algebra**

Arithmetic with Polynomials and Rational Expressions \_ A-APR

Page 158:
Rewrite rational expressions.

Rewrite simple rational expressions in different forms; write a(x) / b = a(x), b(x), where a(x), b(x), a(x), and a(x) are polynomials with the degree of a(x), a(x) less than the degree of a(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.

Reasoning with Equations and Inequalities

A-REI

#### Page 158:

#### Solve systems of equations.

9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 × 3 or greater).

#### **Functions**

Interpreting Functions

F-IF

#### Page 158:

#### Analyze functions using different representations.

- 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. 19\*\*
  - d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior. ★★

Trigonometric Functions

F-TF

#### Page 159:

#### Model periodic phenomena with trigonometric functions.

7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. ★★

#### **MODEL ADVANCED COURSE:**

#### Model Advanced Quantitative Reasoning

#### **Algebra**

Reasoning with Equations and Inequalities

A-REI

#### Page 163:

#### Solve systems of equations.

9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 × 3 or greater).

<sup>19\*\*</sup> indicates Modeling standard.

#### **Functions**

Trigonometric Functions

F-TF

#### Page 164:

Model periodic phenomena with trigonometric functions.

7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. ★★

# APPLICATION OF COMMON CORE STATE STANDARDS FOR English Language Learners and Students with Disabilities

#### Application to Students with Disabilities

#### Page 171:

. . .

Promoting a culture of high expectations for all students is a fundamental goal of the Common Core State Standards. In order to participate with success in the general curriculum, students with disabilities, as appropriate, may be provided additional supports and services, such as:

- Instructional supports for learning based on the principles of Universal Design for Learning (UDL), 20— which foster student engagement by presenting information in multiple ways and allowing for diverse avenues of action and expression.
- Instructional accommodations (Thompson, Morse, Sharpe & Hall, 2005) changes in materials or
  procedures which do not change the standards but allow students to learn within the framework of the
  Common Core.
- Assistive technology devices and services to ensure access to the general education curriculum and the Common Core State Standards.

<sup>&</sup>lt;sup>20</sup> UDL is defined as "a scientifically valid framework for guiding educational practice that (a) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and (b) reduces barriers in instruction, provides appropriate accommodations, supports, and changes, and maintains high achievement expectations for all students including students with disabilities and students who are limited English proficient" by Higher Education Opportunity Act (PL 110–135).

# MASSACHUSETTS CURRICULUM FRAMEWORK

**FOR** 

# ENGLISH LANGUAGE ARTS AND LITERACY

Introduction

Page 3:

#### The Literate Person of the Twenty-First Century

As a natural outgrowth of meeting the charge to define college and career readiness, the standards also lay out a vision of what it means to be a literate person in this century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally...

Guiding Principles for English Language Arts and Literacy Programs in Massachusetts

#### <u>Page 7:</u> Guiding Principle 3

An effective English language arts and literacy curriculum draws on informational texts and multimedia in order to build academic vocabulary and strong content knowledge.

In all of their classes, including history/social science, science and technology/engineering, arts, comprehensive health, foreign language, and vocational and technical subjects, students should encounter many examples of informational and media texts aligned to the grade or course curriculum. This kind of reading, listening, and viewing is the key to building a rich academic vocabulary and increasing knowledge about the world. Each kind of print or media text has its unique characteristics, and proficient students apply the critical techniques learned in the study of exposition to the evaluation of multimedia, television, radio, film/video, and websites. School librarians play a key role in finding books and other media to match students' interests, and in suggesting further resources in public libraries.

Students Who are College and Career Ready

#### in Reading, Writing, Speaking, Listening, and Language

#### Page 9:

#### They use technology and digital media strategically and capably.

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.

#### Reading Standards for Literature Pre-K-5

#### Page 15:

#### Grade 2 students:

Integration of Knowledge and Ideas

7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

#### Page 16:

#### **Grade 5 students:**

Integration of Knowledge and Ideas

7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

#### Reading Standards for Informational Text Pre-K-5

#### Page 19:

Integration of Knowledge and Ideas

#### **Grade 4 students:**

7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

#### **Grade 5 students:**

7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

#### College and Career Readiness Anchor Standards for Writing

#### Page 23:

Production and Distribution of Writing

6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

**8.** Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

#### Writing Standards Pre-K-5

#### Page 24:

Production and Distribution of Writing

#### Pre-Kindergartners (older 4-year-olds to younger 5-year-olds):

**MA.6.** Recognize that digital tools (e.g., computers, cell phones, cameras, and other devices) are used for communication and, with support and guidance, use them to convey messages in pictures and/or words.

#### Kindergartners:

**6.** With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.

#### Page 26:

Production and Distribution of Writing

#### **Grade 1 students:**

**6.** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

#### **Grade 2 students:**

**6.** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

#### **Grade 3 students:**

**6.** With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

Research to Build and Present Knowledge

#### **Grade 3 students:**

**8.** Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

#### Page 27:

Text Types and Purposes

#### **Grade 4 students:**

- 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
  - a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

#### Grade 5 students:

- 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

#### Page 28:

Production and Distribution of Writing

#### Grade 4 students:

6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

#### **Grade 5 students:**

6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Research to Build and Present Knowledge

#### Grade 4 students:

8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

#### Grade 5 students:

**8.** Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

#### Page 29:

### College and Career Readiness Anchor Standards for Speaking and Listening

Presentation of Knowledge and Ideas

**5.** Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

#### Speaking and Listening Standards Pre-K-5

#### Page 32:

Presentation of Knowledge and Ideas

#### **Grade 4 students:**

5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

#### Grade 5 students:

5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

#### Language Standards Pre-K-5

#### Page 37:

Vocabulary Acquisition and Use

#### Grade 2 students:

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2* reading and content, choosing flexibly from an array of strategies.
- e. Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.

#### Grade 3 students:

**4.** Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading* and content, choosing flexibly from a range of strategies.

d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.

#### Page 40:

Vocabulary Acquisition and Use

#### **Grade 4 students:**

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies.
- c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

#### Grade 5 students:

- 4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

# STANDARDS FOR English Language Arts

6 - 12

#### Reading Standards for Literature 6-12

#### Page 48:

Integration of Knowledge and Ideas

#### Grade 6 students:

7. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.

#### **Grade 7 students:**

7. Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).

#### **Grade 8 students:**

7. Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.

#### Reading Standards for Informational Text 6-12

#### Page 51:

Integration of Knowledge and Ideas

#### Grade 6 students:

7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

#### Grade 7 students:

7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).

#### **Grade 8 students:**

7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

#### Page 52:

#### Grades 9-10 students:

7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

#### Page 53:

#### College and Career Readiness Anchor Standards for Writing

Production and Distribution of Writing

6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

#### Writing Standards 6–12

#### Page 54:

Text Types and Purposes

#### **Grade 6 students:**

- 2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
  - a. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

#### Grade 7 students:

- 2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
  - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

#### **Grade 8 students:**

- 2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
  - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

#### Page 55:

Production and Distribution of Writing

#### **Grade 6 students:**

6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

#### **Grade 7 students:**

**6.** Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.

#### **Grade 8 students:**

**6.** Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

#### Page 56:

Research to Build and Present Knowledge

#### **Grade 6 students:**

8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

#### Grade 7 students:

8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

#### **Grade 8 students:**

8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

#### Page 58:

Production and Distribution of Writing

#### **Grades 9–10 students:**

6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

#### Grades 11-12 students:

**6.** Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

#### <u> Page 59:</u>

Research to Build and Present Knowledge

#### Grades 9-10 students:

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

#### Grades 11-12 students:

effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

#### Page 60:

### **College and Career Readiness Anchor Standards** for Speaking and Listening

#### Presentation of Knowledge and Ideas

5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

### Note on range and content of student speaking and listening

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.

#### Speaking and Listening Standards 6-12

#### Page 62:

Presentation of Knowledge and Ideas

#### **Grade 6 students:**

5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

#### **Grade 7 students:**

5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

#### **Grade 8 students:**

5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

#### Page 63:

#### Grades 9-10 students:

5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

#### Grades 11-12 students:

5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

#### Language Standards 6-12

#### Page 66:

Vocabulary Acquisition and Use

#### Grade 6 students:

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies.
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.

#### Grade 7 students:

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7* reading and content, choosing flexibly from a range of strategies.
- c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.

#### **Grade 8 students:**

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading* and content, choosing flexibly from a range of strategies.
  - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.

#### Page 67:

#### Grades 9-10 students:

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies.
  - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology.

#### Grades 11-12 students:

- **4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11–12 reading and content*, choosing flexibly from a range of strategies.
- c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage

STANDARDS FOR Literacy in History/Social

### Studies, Science, and Technical Subjects

6 - 12

Reading Standards for Literacy in History/Social Studies 6–12

#### Page 74:

Integration of Knowledge and Ideas

#### Grades 6-8 students:

7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

#### Grades 9-10 students:

7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or

#### Grades 11-12 students:

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Reading Standards for Literacy in Science and Technical Subjects 6–12

#### Page 75:

Integration of Knowledge and Ideas

#### Grades 6-8 students:

9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

#### Page 76:

#### **College and Career Readiness Anchor Standards for Writing**

Production and Distribution of Writing

6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of

### Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college and career ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

### Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

#### Page 78:

#### Grades 6-8 students:

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
  - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

#### Grades 9-10 students:

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
  - a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

#### Grades 11-12 students:

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
  - a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

#### Page 79:

Production and Distribution of Writing

#### Grades 6-8 students:

**6.** Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

#### Grades 9–10 students:

#### Grades 11-12 students:

6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products

in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

#### Grades 6-8 students:

8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

#### Grades 9-10 students:

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

#### Grades 11-12 students:

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

### **GLOSSARY OF TERMS**

#### Page 100:

**Print or digital (texts, sources)** Sometimes added for emphasis to stress that a given standard is particularly likely to be applied to electronic as well as traditional texts; the standards are generally assumed to apply to both.



# Q1 What technology courses (if any) did you take at The Bromfield School? Please list them below:

Answered: 34 Skipped: 3

#	Responses	Date
1	Computer Tech. (middle school), CADD (Junior Year), and Art Independent Study with Ms.Brooks(not all technology but I did learn the basics of photoshop)	2/23/2014 10:18 AM
2	none	2/17/2014 2:55 PM
3	Comp Tech 3 years Some graphic design course with Mrs. Brooks	2/13/2014 5:12 PM
4	computer science	2/13/2014 2:53 PM
5	comp tech computer graphics web design/flash	2/13/2014 11:38 AM
6	Middle school computer tech	2/13/2014 11:13 AM
7	Compt tech 1 and 2	2/13/2014 10:31 AM
8	Computer science, 9th grade	2/13/2014 1:05 AM
9	comp tech in middle school photography	2/12/2014 6:36 PM
10	Two comp tech classes	2/12/2014 1:44 PM
11	Middle school computer science (intro to microsoft office) And some rudimentary html course	2/12/2014 1:23 PM
12	Comp Tech 6, 7, 8, and that prototype programming class Ms Schenden taught	2/12/2014 1:16 PM
13	None	2/12/2014 1:01 PM
14	Computer tech	2/12/2014 12:39 PM
15	Computer Sciences (middle school sometime) Computer Class with Ms. Brooks in 9th grade	2/11/2014 9:11 PM
16	Photoshop/animation	2/11/2014 7:03 PM
17	N/A	2/11/2014 3:32 PM
18	Computer Science in middle school Computer Science in high school (very basic one)	2/11/2014 3:26 PM
19	website design Photoshop and illustrator Intro programming	2/11/2014 2:50 PM
20	3 years of middle school comp tech classes- 6th gade: Mr. Pike 7th grade: Mr. Pike 8th grade: Ms. Brooks Freshman year, photography class with Mr. Pike	2/11/2014 2:36 PM
21	None	2/11/2014 2:08 PM
22	None	2/11/2014 2:06 PM
23	-Computer technology in middle school -Journalism	2/11/2014 1:13 PM
24	comp tech	2/11/2014 12:41 PM
25	Photography (Freshman Year)	2/11/2014 12:26 PM
26	Comp tech (6th & 7th Grade) Indroduction to Computer Science (11th Grades)	2/11/2014 11:42 AM
27	Seventh grade comp. tech	2/11/2014 11:37 AM
28	None	2/11/2014 11:17 AM
29	Computer Technology in 6th, 7th and 8th grade	2/11/2014 11:04 AM
30	CADD Digital Photography	2/11/2014 10:58 AM
31	I took CADD	2/11/2014 10:48 AM

32	Computer Tech	2/11/2014 10:32 AM
33	Middle school computer science classes (HTML, word, powerpoint, etc) Flash animation and web design Computer Graphics Intro to computer science	2/11/2014 10:30 AM
34	Computer Technology with Mr. Pike, maybe 7th grade. CADD with Brookes	2/11/2014 10:29 AM

# Q2 If you did take any technology courses at Bromfield, which ones were useful in giving you skills that were beneficial to you as a high school student?

Answered: 27 Skipped: 10

#	Responses	Date
1	All of the ones listed above	2/23/2014 10:18 AM
2	Virtually none of them	2/13/2014 5:12 PM
3	not really any of them	2/13/2014 2:53 PM
4	comp tech -for learning how to use word/powerpoint better computer graphics - for making better images for assignments web design/flash was for personal interest	2/13/2014 11:38 AM
5	None	2/13/2014 11:13 AM
6	I didn't do anything in high school that required extensive technology use	2/13/2014 10:31 AM
7	All	2/13/2014 1:05 AM
8	neither	2/12/2014 6:36 PM
9	No, the classes provided no benefit and did not help with work in other classes.	2/12/2014 1:44 PM
10	I didnt really get anything out of either. I retained the most basic of excel skills and know about different microsoft word templates.	2/12/2014 1:23 PM
11	Mostly the latter in the above list, though even that was rather lacking.	2/12/2014 1:16 PM
12	None	2/12/2014 1:01 PM
13	Computer tech	2/12/2014 12:39 PM
14	Mrs. Brooks' taught me some stuff on Excel and Word that I didn't know existed	2/11/2014 9:11 PM
15	Photoshop class was very helpful for art school!	2/11/2014 7:03 PM
16	Both were useful	2/11/2014 3:26 PM
17	website design Photoshop and illustrator	2/11/2014 2:50 PM
18	8th grade comp tech taught us how to use the various Microsoft products, including word, powerpoint, and excel. All necessary applications for high school, college, and beyond	2/11/2014 2:36 PM
19	Journalism was useful in that it helped me learn to conduct online research and use certain programs that I would not have understood otherwise.	2/11/2014 1:13 PM
20	None	2/11/2014 12:26 PM
21	Comp tech was marginally beneficial in creating familiarity with programs such as MS powerpoint and excel.	2/11/2014 11:42 AM
22	Not particularly.	2/11/2014 11:37 AM
23	Digital Photography	2/11/2014 10:58 AM
24	It wasnt really all that beneficial for me in highschool, but it was interesting	2/11/2014 10:48 AM
25	Computer Tech	2/11/2014 10:32 AM
26	All of these courses were very helpful to me both in high school and in college.	2/11/2014 10:30 AM
27	Gained some knowledge of CADD, but not very useful for what I'm studying.	2/11/2014 10:29 AM

# Q3 What suggestions do you have for additional technology courses that would have been useful during your time at The Bromfield School to prepare you for college?

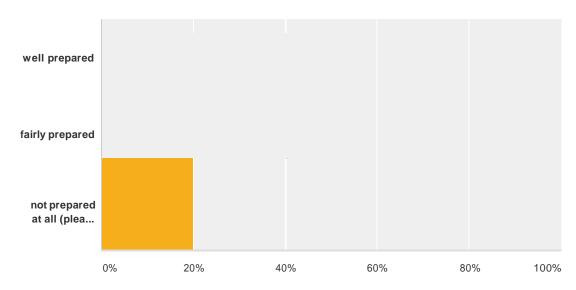
Answered: 30 Skipped: 7

#	Responses	Date
1	Looking back I think a class that addressed the basics of video making and editing would have been beneficial. There are a lot of different kinds video editing software out there, having a solid foundation would probably go a long way. Now that I am in art school I see New Media art (Film, Glitch Art, GIF Art, etc) becoming more of a driving force in the art community.	2/23/2014 10:18 AM
2	typing class i think would help benefit rising freshman. since in college majority of professors allow you to bring your computer to take notes its helped me a lot to have computer skills. also a class on power point and excel	2/17/2014 2:55 PM
3	Programming Web Design Computer Hardware Video Editing or some sort of Film Production class Radio or some sort of Music Technology class	2/13/2014 5:12 PM
4	Maybe one that teaches you how to master basic programs like Word and EXCEL. Learning how to manipulate margins, insert charts, create charts to present data. An introduction to statistical analysis software like STATA could also probably benefit a lot of people because once you learn one the rest are easier.	2/13/2014 2:53 PM
5	programming courses - a must-have, so students can get an idea of their interest in programming early. generally I would recommend advanced excel stuff because that stuff is useful for personal budgeting/future careers but I can see it being boring for high school students my friend got like a Microsoft certification for mastering word/ppt/excel, maybe look into that maybe a seminar like a web safety seminar - how to avoid getting viruses, the dangers of putting personal information on the internet, etc. generally a lot of stuff I learned about computers/technology really only came from stuff I read and learned about on my own	2/13/2014 11:38 AM
6	Teaching coding from a young age is the single most important skill one can have in the job market right now.	2/13/2014 11:13 AM
7	nothing. I don't think it was neccessary to learn. I forgot anything I didn't use and anything I did use	2/13/2014 10:31 AM
8	Apple programs	2/13/2014 1:05 AM
9	computer technology was in my opinion a huge waste of time. mr pike's photography class was equally useless	2/12/2014 6:36 PM
10	None or the technogy courses from high school have helped during college.	2/12/2014 1:44 PM
11	Offer a beginning programming course in Java and some more extensive html. The two are very different as Java actually incorporates loops and conditions which is the interesting part of coding for me. It would give kids who might want to be CS majors a chance to see what actual programming is like. Also MIT's Scratch is a great tool for teaching kids the conceptual basics of programming.	2/12/2014 1:23 PM
12	Just add more. Programming, architecture, anything beyond the basic HTML and Word that you currently have. Technology is the future, CS has the highest average starting salary of any college major currently, and you need to encourage kids to go that route.	2/12/2014 1:16 PM
13	Typing class, class on Microsoft 2013, better cad program.	2/12/2014 1:01 PM
14	How to use excel. This should be taught as a junior or senior course	2/12/2014 12:39 PM
15	other classes relating to photoshop	2/11/2014 7:03 PM
16	Programming classes (java,python,matlab,etc.)	2/11/2014 3:32 PM

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17	Having more coding classes would be more helpful. The computer science courses I took just went over the basics of how to use Microsoft Office, and the packets we did were tedious and unnecessary. There definitely could have been time to learn other important computer skills (Photoshop, coding in Python etc)	2/11/2014 3:26 PM
18	EXCEL	2/11/2014 2:50 PM
19	We should have had more instruction on how a computer works and what to do if something malfunctions.	2/11/2014 2:36 PM
20	Courses that teach how to use technology in an artistic way (CAD is good, but also should teach how technology applies to different types of art; i.e. music technology, website design, Photoshop, etc.)	2/11/2014 1:13 PM
21	Maybe a course that helps you with research. Like online databases and Endnote like programs.	2/11/2014 12:26 PM
22	Better applied software instruction in science courses.	2/11/2014 11:42 AM
23	From the sixth grade, every student should be enrolled in mandatory computer science course teaching them to code. This is more important in today's job market than many of the other subjects.	2/11/2014 11:37 AM
24	Real Intro to computer science. Animation	2/11/2014 11:17 AM
25	AP Computer Science	2/11/2014 11:04 AM
26	I realize that a computer science class exists, but I would highly recommend a more intensive program in computer programming languages to be made available, as a great deal of research in college has to do with computer programming.	2/11/2014 10:58 AM
27	It would be cool if game design classes were an option at Bromfield	2/11/2014 10:48 AM
28	I had little to no issues in college.	2/11/2014 10:32 AM
29	A class that teaches the intricacies of MS Excel would be highly beneficial to students. I found this program very important in college, especially as a business student.	2/11/2014 10:30 AM
30	I think it is VERY VERY VERY VERY VERY VERY VERY important that there be a course teaching the ins and outs of computer programming. This is the future and as a current student I see many of my peers with this skill and using it to start companies and get jobs at the fastest growing companies in the world. Also, I think it would be wildly popular if offered at Bromfield. Focus on things like Javascript, C++, and iOS development. Also, I would have found it really beneficial to know excel. Some courses in Bromfield touched on Excel but I argue for a course focused on teaching students the ins and outs of Microsoft Office - Powerpoint and Excel specifically. Powerpoint unit could teach students what makes a good presentation, what to avoid, ect. Excel is huge because it is used in a lot of different disciplines; actuarial science, accounting, resource economics, finance, mathematics, statistics, economics. These are all things that students would really like to learn about and get engaged with because they're on their computers all night anyway, why not teach them skills on the computer that they can put on their resume and become more desirable for schools and employers?	2/11/2014 10:29 AM

## Q4 How well prepared were you for college from a technology perspective?

Answered: 36 Skipped: 1

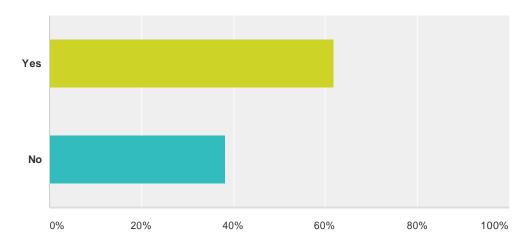


Answer Choices	Responses	
well prepared	41.67%	15
fairly prepared	41.67%	15
not prepared at all (please comment)	16.67%	6
Total		36

#	not prepared at all (please comment)	Date
1	anything i knew about technology was learned on my own	2/12/2014 6:36 PM
2	Most technology learning done by students both in high school and college is done independently and in the student's own free time. Useful programs such as Photoshop are much richer in content then can be taught during a 45 minute class. Learning a program such as this is very trial and error based and dependent on the student's eagerness to learn. During high school most students would rather fool around and use that time to relax instead of focusing on the assignment the teacher has given them.	2/12/2014 1:44 PM
3	I knew my way around a computer but had no sense of how much I would like programming. If I had been exposed to it in high school I would probably be majoring in CS.	2/12/2014 1:23 PM
4	Not from Bromfield, at least. All I know I taught myself, and that prepared me very well.	2/12/2014 1:16 PM
5	Didn't take enough computer class. Didn't offer enough computer class with more than just how the web and word works.	2/12/2014 1:01 PM
6	excel needs to be taught more than anything. i use it in every course now and dont know how to	2/11/2014 12:41 PM

# Q5 Was technology used at Bromfield to facilitate communication and /or collaboration between students or with the teacher (i.e. Google Docs, blogs, etc.)?

Answered: 34 Skipped: 3

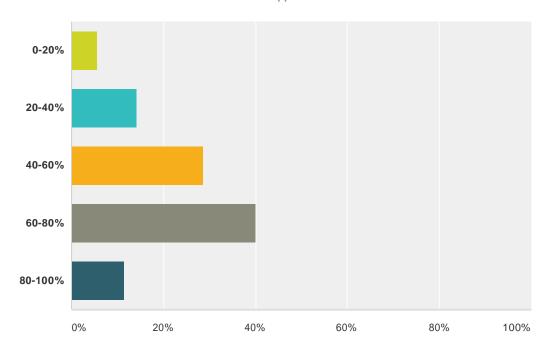


Answer Choices	Responses
Yes	<b>61.76%</b> 21
No	<b>38.24%</b> 13
Total	34

#	If yes, please name them:	Date
1	Google Docs, Gmail, and edline	2/23/2014 10:33 AM
2	Google docs	2/12/2014 1:45 PM
3	Dr Vanderveen a little bit but thats it	2/12/2014 1:26 PM
4	Email, Google Docs	2/11/2014 9:12 PM
5	docs	2/11/2014 3:33 PM
6	Google Docs, Websites, Video Webcasts	2/11/2014 3:27 PM
7	google docs, facebook	2/11/2014 2:51 PM
8	Google Docs- Not really with the teacher though	2/11/2014 12:28 PM
9	Google docs	2/11/2014 11:43 AM
10	google docs, teacher's websites	2/11/2014 11:06 AM
11	Google Docs	2/11/2014 11:00 AM
12	Google Docs, Teacher's website, facebook	2/11/2014 10:34 AM
13	Google Docs was a great collabarative tool. Look into Moodle for teachers, it is the platform used at my school and is really easy to get organized with.	2/11/2014 10:33 AM
14	Google docs, teacher websites	2/11/2014 10:32 AM
15	Google docs, word thingS	2/11/2014 10:26 AM

### Q6 What percentage of your Bromfield teachers used technology?

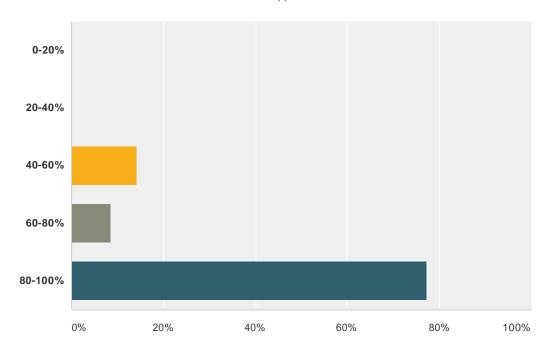




Answer Choices	Responses	
0-20%	5.71%	2
20-40%	14.29%	5
40-60%	28.57%	10
60-80%	40%	14
80-100%	11.43%	4
Total		35

### Q7 What percentage do your current college professors use technology?

Answered: 35 Skipped: 2



Answer Choices	Responses	
0-20%	0%	0
20-40%	0%	0
40-60%	14.29%	5
60-80%	8.57%	3
80-100%	77.14%	27
Total		35

# Q8 What tools and assignments are incorporated in instruction at your college to allow for collaboration between students and teachers?

Answered: 32 Skipped: 5

#	Responses	Date
1	SAIC has a website similar to Edline that lets me check my grades, chat with professors and students, and turn in assignments online. Also since the entire school is using Mac computers, teachers can use "Air Drop" to give the class assignments wirelessly as long as we are in the same room and have a wifi connection(no USB required). Recently I became authorized to use my school's 3D printers as well. The school has also started adopting a policy that dements it's students become well versed in their technology. Thanks to that policy I have also learned how to use Dreamweaver and TextWrangler to write HTML for my own website, learn more advanced Photoshop and Adobe Illustrator skills, and become well versed in Adobe Fireworks. Currently I am in a class that focuses on the relationship between technology and art and have learned the basics of machines and circuitry.	2/23/2014 10:33 AM
2	we use something called Moodle where all the professors have pages where assignments and quizzes are posted. professors are able to see how much students are on there and when they log in. my professors use technology majority of the class time. using power points which are later posted on moodle. i have learning accommodations so moodle really helped me with communicating with my professors.	2/17/2014 3:19 PM
3	Blackboard, Lore.	2/13/2014 5:12 PM
4	Google blogs Blackboard	2/13/2014 11:58 AM
5	Piazza Moodle Google docs/sites dropbox email	2/13/2014 11:41 AM
6	We use Moodle, which is like Blackboard, and easily allows students and professors to communicate, post homework, reading, and cuts down on the need to purchase textbooks and drastically reduces wasted paper for printing out readings (since they can be read via pdfs.) We also use different systems to submit papers, which are able scan papers preliminarily for plagiarism.	2/13/2014 11:17 AM
7	There are a lot of online quizzes, onine chem and calc hw that require java, some powerpoint presentations	2/13/2014 10:32 AM
8	Articles, blogs, assignments	2/13/2014 1:06 AM
9	Blackboard Microsoft expressions (Wordpress) Google docs Turnitin	2/12/2014 1:45 PM
10	Piazza and blackboard	2/12/2014 1:26 PM
11	Literally every assignment is submitted and graded electronically. Almost all classes have Piazza pages where students, professors, and TAs can talk about the class. As a CS major, technology is obviously an integral part of most of my classes and assignments anyway.	2/12/2014 1:18 PM
12	Blackboard and other websites.	2/12/2014 1:03 PM
13	Blackboard- turn in assignments, post power points	2/12/2014 12:41 PM
14	Blackboard	2/11/2014 9:12 PM
15	the notes and homework assignments can be viewed using Moodle	2/11/2014 7:04 PM
16	Pearson online education labs	2/11/2014 3:33 PM
17	Blackboard and Canvas (two online assignment websites)	2/11/2014 3:27 PM
18	Blackboard email	2/11/2014 2:51 PM
19	We use a website called Blackboard, which is a portal where we can view posted documents, readings, assignments, and grades from professors, as well as submit written homework and take online tests.	2/11/2014 2:38 PM

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20	We have a website where all our classes are organized so that professors can post readings as attachments, can conduct blogs or forums, can create online quizzes, or otherwise post important class messages or documents	2/11/2014 2:10 PM
21	There is a lot of online homework and use of online forums to post assignments. However, I think that is only necessary at a university because there are so many students to keep track of. In a small school like Bromfield, it is more effective and clear to communicate about assignments directly.	2/11/2014 1:15 PM
22	most assignments are given online, online hw sites as well as worksheets given from a website	2/11/2014 12:42 PM
23	EVERYTHING is online through a website called Moodle. You submit all of your papers online to save paper and all homework and reading assignments go through Moodle.	2/11/2014 12:28 PM
24	Online work assignment and submission (Blackboard)	2/11/2014 11:43 AM
25	Computers	2/11/2014 11:17 AM
26	iClickers Blackboard (online connection to classes, kind of like Edline) Doodles	2/11/2014 11:06 AM
27	Some homework assignments require going onto a website. All class information is posted on one website.	2/11/2014 11:00 AM
28	Moodle	2/11/2014 10:49 AM
29	Ulearn, Blackboard: All classes and materials available online. VERY helpful. Recipe database: Little more important for specifically the college	2/11/2014 10:34 AM
30	Moodle!! This is a really great tool for students to stay up to date with homework. Teachers can post their assignments, checklists for readings, they can post multimedia like articles/videos/songs, also they can use it to actually quiz students or use it for homework through multiple choice questions or essay type questions. I strongly urge you to look into Moodle.	2/11/2014 10:33 AM
31	Student-teacher forums are present in most of my classes, allowing students to pose questions that can be answered by other students as well as the professor. Additionally, all grades can be checked online at any time via the online gradebook, giving students better understanding of where they stand.	2/11/2014 10:32 AM
32	Email, homework servers	2/11/2014 10:26 AM

# Q9 What technology would be most beneficial for Bromfield to acquire over the next 3 years for instruction and student use?

Answered: 23 Skipped: 14

#	Responses	Date
1	I think that some basic video equipment might be beneficial for both people in theater, art, and technology classes.	2/23/2014 10:46 AM
2	Adobe Creative Cloud. The full suite has software that is used by almost all technology occupations. As a film student in college I am frequently using Premiere, After Effects, and Audition. Photoshop, Dreamweaver and Illustrator are other programs that would be incredibly useful to teach to high schoolers. The only thing CC is lacking is a 3D modeling software, so Maya or 3ds Max would be a good choice for that.	2/13/2014 5:22 PM
3	depends on what you want to do but an email system that's better than what Bromfield used to have back in the day might be nice but not important. better listserv management, etc. moodle is definitely a bonus here but I think Bromfield has something else already? I don't know the name. but basically a way to keep track of assignments/grades online has been a plus.	2/13/2014 11:44 AM
4	A teacher that teaches online coding should be hired and the class should be mandatory at some point during middle school, and highly encouraged in high school.	2/13/2014 11:21 AM
5	Not necessary	2/13/2014 10:33 AM
6	Macintosh programs	2/13/2014 1:06 AM
7	Piazza	2/12/2014 1:32 PM
8	PC's that aren't trying to use a Pentium 3 to run Windows 2000 or XP. Seriously, that almost made me gag when I looked inside one and found out. Revamping the library was a step in the right direction, now do it for the labs. Piazza is also a free service that some teachers might want to look into.	2/12/2014 1:30 PM
9	How to run Microsoft office and what the components it has.	2/12/2014 1:05 PM
10	Blackboard like system	2/12/2014 12:41 PM
11	The technology is there, you just have to change how it is used. Faster internet should be your main priority.	2/11/2014 3:35 PM
12	Better computers	2/11/2014 3:30 PM
13	Invest in Apple products. PCs are outdated, and it is unfortunate that the most popular technology (Apple) was incompatible with Bromfield's technology.	2/11/2014 2:40 PM
14	This website is similar to edline, but I find it easier to use and more versatile in its applications. It's called Moodle, and would be a nice transition to make if possible.	2/11/2014 2:14 PM
15	Moodle. I would highly recommend looking into it.	2/11/2014 12:31 PM
16	instruction on spreadsheet software (excel)	2/11/2014 11:46 AM
17	More computers to accommodate more computer science classes. If students have no prior programming experience before college they are seriously behind in math/science/engineering majors.	2/11/2014 11:40 AM
18	A real technology teacher	2/11/2014 11:18 AM
19	Computer Programming courses	2/11/2014 11:01 AM
20	Some sort of online site where assignments can be posted so each student can easily access and see what their homework is. This would also provide a good way to distribute grades	2/11/2014 10:51 AM

21	Smart boards are great, and the current computers aren't bad. I would say to focus on software.  Make sure all computers have Excel/Powerpoint and computer programming software. Also, get a platform like Moodle to centralize assignments and make it easier for students to keep up with whats going on.	2/11/2014 10:39 AM
22	If teachers simply started using some sort of forum website such as Piazza, it would be very beneficial for students and teachers alike, by facilitating communication.	2/11/2014 10:35 AM
23	I think Bromfield is very advanced in technology.	2/11/2014 10:27 AM

# Q10 Do you have any other suggestions/comments about technology at The Bromfield School?

Answered: 18 Skipped: 19

#	Responses	Date
1	Other than what I have said before, the school might want to consider a Home Economics class so kids can take care of themselves once they leave. I have a couple friends who can't cook and end up wasting a lot of money on eating in restaurants in Chicago. I'm sure that parents of the students would be grateful for lessons like this as well. This kind of class would require technology like ovens or stoves, not the traditional type of technology you seem to be addressing in this survey. Even so, I think you should at least think about the living skills of your students after high school. If finding money in the budget for a teacher is a problem - maybe the class doesn't need to be a regularly scheduled class. I know that when the school did a test run of their driver's ED program it was after school, perhaps that would be a better way of approaching the situation. That way people wouldn't have to worry about replacing academics in their schedules either. Or you could make a Home Economics club where people could attend weekly sessions on their own free will. Different guests could come in on different weeks and talk about various life skills.	2/23/2014 10:46 AM
2	It makes me happy to hear that technology is going to become a bigger part of Bromfield's system. When I went through it was very difficult to get a good education with regards to technology without teaching myself on my own time	2/13/2014 5:22 PM
3	Dr. Vanderveen uses her smartboard the best out of anyone I have seen.	2/13/2014 2:55 PM
4	I think a big challenge with technology at Bromfield is the fact that there aren't a lot of computers that can be accessed easily, generally you have to go when the teacher is there, the library had horrible computers and sometimes they didn't work maybe the school needs better firewall/install management	2/13/2014 11:44 AM
5	I'm not sure how the system functions now, but it used to be most students in the class knew far more than the teachers in technology classes. We were born into this, and grew up learning how have grown up learning computers, Powerpoint, Word, etc, and yet the comp. tech. teachers were assigning us assignments like "make a powerpoint." Teaching how to use the most functional programs (Excel, and Adobe premium products) would give a huge advantage to Bromfield students entering the college world and work force.	2/13/2014 11:21 AM
6	Technology in classrooms is often just another distraction from the material being taught. Lots of time is wasted trying to figure out how to set up and use smart boards.	2/12/2014 1:49 PM
7	Smartboards are mostly just distracting. Please offer programming courses. A lot of the math and science minded kids will be grabbed by it and it helps to start early. Microsoft excel is an infinitely more valuable skill than knowing a foreign language.	2/12/2014 1:32 PM
8	Expand the IT department. Chris and Oksana are great, but on their own in that little cave they're very limited. They need more people and resources to effectively handle the inevitable influx of new technology that will need more maintenance.	2/12/2014 1:30 PM
9	The technology program is in jeopardy off failing.	2/12/2014 1:05 PM
10	More consistent use of online homework sites a lot of college work is posted online, so it is a beneficial to become accustomed to looking online for the homework assignment.	2/11/2014 9:13 PM
11	Overall good experience, I thought the smart boards were a waste. A projector works just fine.	2/11/2014 3:35 PM
12	I think technology use at Bromfield is pretty decent.	2/11/2014 3:30 PM
13	I don't think the lack of technology courses is an issue but rather the lack of teachers using technology and continuously wasting paper.	2/11/2014 12:31 PM
14	Don't focus on devices (Smartboards) focus instead on students ability to use programs such as excel (most valuble), powerpoint, autocad and other computational software	2/11/2014 11:46 AM
15	Teach children to code starting from sixth grade. No exams, no tests. Just teach them to code.	2/11/2014 11:40 AM

16	Students LOVE working on the computer and making everything accessible online will definitely boost their motivation and scores.	2/11/2014 10:39 AM
17	Technology classes at Bromfield are currently adequate, but not enough students seem to take advantage of them. I took a technology class with Ms. Brooks every year, and there were never very many people in the class, even though they were well taught and really helpful. Students may not be fully aware of the opportunities available to them.	2/11/2014 10:35 AM
18	It's very advanced	2/11/2014 10:27 AM

# Q11 Please share any other comments relative to technology that may be helpful to us.

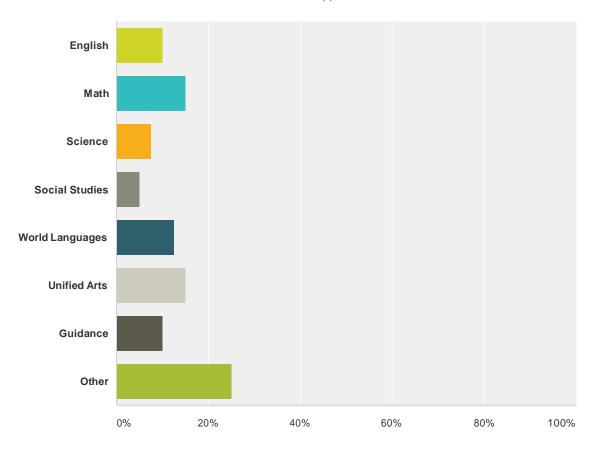
Answered: 7 Skipped: 30

#	Responses	Date
1	Nothing left to say	2/23/2014 10:46 AM
2	Smart boards are not a necessary tool for the way that 90% of teachers use them. Put that money elsewhere! Technology doesn't have to be the answer to learning even though society today is making people believe that.	2/13/2014 10:33 AM
3	My name is Matt Schmidt.	2/12/2014 1:30 PM
4	Start a how to type class earlier than high school.	2/12/2014 1:05 PM
5	Dont buy any more smartboards.	2/11/2014 3:35 PM
6	I think that taking notes on paper is important because I have many professors thatdo not allow computers.	2/11/2014 11:07 AM
7	PLEASE PLEASE teach kids how to program. I already know there are a lot of them that would take the course. It's great because they can program a website/game and have a finished product that they can put on their resume or whatever. This would be a very "value-added" course.	2/11/2014 10:39 AM

#### Bromfield's Technology Input

#### **Q3** Department

Answered: 40 Skipped: 0



Answer Choices	Responses	
English	10%	4
Math	15%	6
Science	7.50%	3
Social Studies	5%	2
World Languages	12.50%	5
Unified Arts	15%	6
Guidance	10%	4
Other	<b>25</b> %	10
Total	40	0

#### Bromfield's Technology Input

Q4 The last technology plan and recent district budgets focused on updating labs, teacher computers, and student computers. For the next technology plan, we are looking for your input as to what technology you would like for instructional purposes.

Answered: 38 Skipped: 2

#	Responses	Date
1	Am looking for stations to run SmartMusic on, would like at least one department laptop with "SmartMusic" and "Finale", and a Smart Board.	2/26/2014 11:29 PM
2	either a laptop cart or an iPad cart (25) so we can use them to do large group presentations	2/23/2014 2:08 PM
3	I can instruct effectively with the technology I have in the classroom. A Smartboard would be a welcomed addition; however, I would require training in using it fully.	2/12/2014 9:18 PM
4	I am interested in professional development to strengthen my skills around the technology I have in my classroom. The use of the Dragon Speaks license is something I need as well. Thank you!	2/10/2014 2:43 PM
5	My office is small, and at most I see 3 students here at a time. If I have a good working desktop (Oksana had said she'd put me on a list to upgrade) and an iPad (which I do), I'm happy.	2/9/2014 9:57 AM
6	smart board updates in technology etc to existing smart boards in the classroom	2/7/2014 8:40 AM
7	Tools (either software or hardware) that allow students to do interactive work in class (quizzes, tests, projects)	2/6/2014 12:10 PM
8	Another computer, preferably an iMac to support (hopeful) future iPad use, in the back office to support the teachers (I have some that come in to the back office to work) and to support the VHS students. There are many blocks that are double-booked and having another computer in a quiet space for the VHS students would be helpful. An overhead projector and pull-down screen for the front of the library to make instruction easier for teachers when they are using the front computers. The library is often double-booked and being able to show students on a screen, rather than relying on describing, would be beneficial to all. Permanent overhead projector in the cafeteria. Thanks for considering!	2/6/2014 8:42 AM
9	I would like to be able to use the activities that I made through Quia in the language lab consistently and successfully. I would also like to be able to use Google or Internet Explorer and not have to guess which to access Grade Quick, etc. through. It seems an iPad would enhance instruction but a course in how to use and ensure compatibility with my current computer and Smart board would be needed.	2/5/2014 4:42 PM
10	A Smartboard !!! OK that's just me. (PLEASE PLEASE PLEASE) I SKYPE France - I could use a much better speaker system. Faster Internet that doesn't stall out (right in the good parts) Ability for students to record at home and send to me. I've been allowing use of cellphones in class (on-line dictionary) any suggestions?	2/5/2014 3:09 PM
11	If it's possible and I don't know the name of the software, but I'd be interested in using student "clickers" to formatively assess what students know or what I've taught them, when it comes to topics like grammar and literature. The idea is I put a question up on the projector, give some choices for answers, and then the kids click in with responses that get tallied by the program and then presented to the class.	2/5/2014 1:43 PM
12	I honestly cannot think of anything except perhaps a more user-friendly remote pad for the computer projector.	2/4/2014 2:34 PM
13	The computer/projector setup in room 198 has been extremely helpful for teaching art history and discussing examples of artwork. A similar setup could be useful in the ceramics room eventually - particularly a computer or laptop for research and examples.	2/4/2014 2:17 PM

#### Bromfield's Technology Input

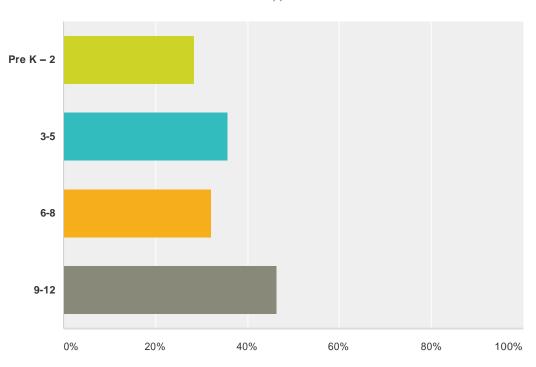
	Bronnield's Technology Input	
14	Would it be possible to get new computers and monitors for the Learning Center? We have 10 computers. Thanks!	2/4/2014 1:59 PM
15	A laptop cart to be shared either by department, by grade level, or by wing. It is becoming increasingly harder to book the computer labs in the library because many people are trying to sign up for them (so you need to be proactive and sign up far in advance.) Since it seems that a dedicated computer lab for teachers to use with their classes may not be in the cards anytime soon, it would be useful to have a traveling laptop cart to be used in the classroom to support research and using other online teaching tools.	2/4/2014 1:20 PM
16	Subscriptions to adaptive learning websites that have science material for the 8th grade level.	2/4/2014 12:57 PM
17	I would be interested in going toward iPads for all, but only if they came with instructional techniques, App suggestions and uses, etc.	2/4/2014 12:54 PM
18	Updated computers for my students.	2/4/2014 12:26 PM
19	an iPad this would enable me to formally keep track of data assessed on individual singers, would enable me to create music documents that could then be projected for the class to see, would enable me to edit audio files that I take when I record the classes and have them assess themselves, and so so so so much more. I feel that it would be an invaluable tool for me as a music educator.	2/4/2014 11:38 AM
20	I would like teacher lectures to be available on-line or through the website for students to be able to access the curriculum if they have a snow day or are unable to attend school for medical reasons.	2/4/2014 11:07 AM
21	clickers with alphanumeric inputI currently have clickers that only do multiple choice from CPS which integrate with my test generator software a laptop cart, with Vernier LoggerPro software for data collection and analysis, or in class literature research/writing assignments or tutorials (I haven't been keeping up with trends in instructional technologythere are probably lots of cool applications and devices that would be useful, but I don't know what they are)	2/4/2014 11:05 AM
22	I think having updated computers in the labs makes working with the students that much easier. For Guidance, laptop computers that can be brought to classrooms would make it even easier for us to work with students on colleges and careers.	2/4/2014 9:57 AM
23	iPads in Guidance and / or a lap top cart for our work with students and the Naviance Program.	2/4/2014 8:53 AM
24	for across the school and curriculum - technology and support to create webcasts of classroom lessons, to create flipped classrooms. sets of ipads for classrooms (maybe not 1:1, but instead 1:2 or 1:3). Create a virtual / hybrid technology training program for teachers for the lab, lego mindstorms ev3, software (animation-ish, inspiration, inspire data), for Martha's lab possibly drawing tablets	2/4/2014 8:47 AM
25	We have 10 computers in the Learning Center which all have Windows XP. The computers are very slow to load which interferes with student work. Faster loading computers would help greatly. We also have a very old printer which has difficulty interfacing with the computers.	2/4/2014 8:38 AM
26	I would like computers to support Quia vocab and grammar activities. I am hoping that Java and other updates will bring this to pass.	2/4/2014 7:15 AM
27	Large Flat Screen televisions to replace the old vacuum tube ones. Up to date desktop classroom computers for teachers.	2/4/2014 6:04 AM
28	Classroom access to computers (laptops) would be nice.	2/3/2014 11:12 PM
29	1) Voicethread. 2) A full day onsite workshop to the World language teachers learn and/or update knowledge on how to use the language lab (sandy@languagelabtraining.com)	2/3/2014 9:34 PM
30	Remote access tablet	2/3/2014 8:08 PM
31	iPads Speech to text technology Screen readers Audio textbooks	2/3/2014 6:06 PM
32	iPads Speech to text technology Screen readers Audio textbooks	2/3/2014 6:06 PM
33	iPads Speech to text technology Screen readers Audio textbooks	2/3/2014 6:05 PM
34	iPads are always good. Updated computers for my room. New printer.	2/3/2014 4:49 PM
35	I would like a set of graphing calculators and applicable software to use with them. This topic has already been brought to the attention of Scott by Russ Wass.	2/3/2014 3:41 PM
36	Slow motion video camera	2/3/2014 3:38 PM

### Bromfield's Technology Input

	37 1	
37	I use computers frequently for research. I would love to have computer cart so it can be mobile with me.	2/3/2014 3:35 PM
38	Two additional sets of 30 TI-30+ Graphing Calculators, which are hand-held computers that are used in most of our math classes here and are the technology that is allowed and required for the AP Calculus and Statistics Exams. Scott Hoffman and Chris Boyle have received e-mails from me discussing this in more detail.	2/3/2014 3:08 PM

### Q1 In which grade is your child(ren)?

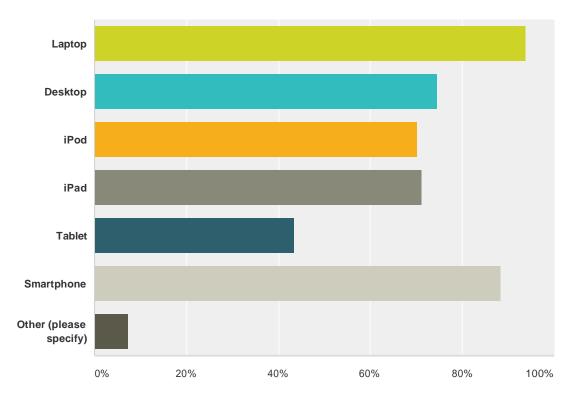
Answered: 205 Skipped: 0



Answer Choices	Responses
Pre K – 2	<b>28.29%</b> 58
3-5	<b>35.61%</b> 73
6-8	<b>32.20%</b> 66
9-12	<b>46.34%</b> 95
Total Respondents: 205	

# Q2 Which technology devices do you have at home? (Please check all that apply)

Answered: 205 Skipped: 0



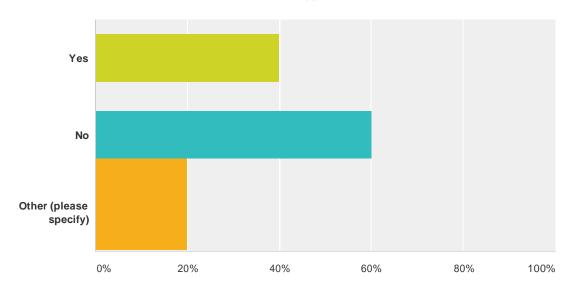
Answer Choices	Responses	
Laptop	93.66%	192
Desktop	74.63%	153
iPod	70.24%	144
iPad	71.22%	146
Tablet	43.41%	89
Smartphone	88.29%	181
Other (please specify)	7.32%	15
Total Respondents: 205		

#	Other (please specify)	Date
1	Arduino	2/13/2014 3:54 AM
2	Books	1/31/2014 10:13 AM
3	e-reader	1/30/2014 7:35 PM
4	nook	1/30/2014 6:12 PM
5	Wii	1/30/2014 10:44 AM
6	electric typewriter	1/29/2014 10:01 PM
7	Tv	1/29/2014 8:35 PM

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8	kindle fire	1/29/2014 8:32 PM
9	Nook w/ internet access	1/29/2014 8:14 PM
10	Video games	1/29/2014 8:11 PM
11	my 6th grader has her own macbook, ipad and smartphone	1/29/2014 4:39 PM
12	Apple TV, Cable Box	1/29/2014 4:20 PM
13	iPhone	1/29/2014 3:44 PM
14	Servers	1/29/2014 3:33 PM
15	servers	1/29/2014 2:41 PM

# Q3 Are there any issues with your child using the technology at home? Example: Time restraints, multiple people needing device at the same time, etc.

Answered: 203 Skipped: 2



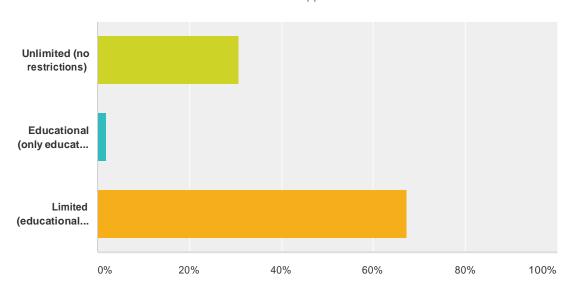
Answer Choices	Responses	
Yes	<b>28.57%</b> 58	
No	<b>60.59%</b> 123	
Other (please specify)	<b>10.84%</b> 22	
Total	203	

#	Other (please specify)	Date
1	not in their room after 9pm	2/25/2014 5:53 PM
2	rarely but occasional	2/12/2014 5:19 PM
3	Keeping laptop up to date with software the schools like to use, having compatible software/programs to run programs assigned by Bromfield teachers, multiple people needing the device at the same time, learning curve in understanding how to access/use computer programs	2/12/2014 1:46 PM
4	We limit their time with technology and expect them to spend time reading as well.	2/7/2014 8:15 AM
5	We set time limits	2/3/2014 6:31 PM
6	wired in too much.	2/2/2014 9:22 PM
7	One device + two kids = fights + broken equipment = limited time due to direct supervision required to prevent tantrums	1/30/2014 9:03 PM
8	Limit screen time 2 hours max	1/30/2014 8:27 PM
9	My husband and I have work computers and my daughter uses the i Pad	1/30/2014 1:09 PM
10	time restraints	1/30/2014 11:31 AM
11	Time restraints but also the fact that we want to limit screen time.	1/30/2014 9:57 AM
12	just keeping a limit to the amount of screen time	1/30/2014 7:27 AM

	, ,	
13	Try to limit the amount of time my child is STARING AT A SCREEN.	1/30/2014 12:13 AM
14	teaching limits in time on the computer	1/29/2014 11:33 PM
15	Not yet, but as the kids grow up, I can see multiple people needing a device at the same time.	1/29/2014 10:32 PM
16	We have time restraints in general, but for school work no	1/29/2014 9:53 PM
17	Battles over how much time and freedom to give them	1/29/2014 8:16 PM
18	the issue is too much screen timenot healthy!	1/29/2014 8:15 PM
19	time- could be an issue on some days	1/29/2014 8:14 PM
20	Yes, we have two children who share one desktop which they can use for homework	1/29/2014 7:50 PM
21	Time restraints	1/29/2014 3:17 PM
22	can't connect several devices to broadband	1/29/2014 3:09 PM

# Q4 If you have technology at home, how does your child(ren) use it?

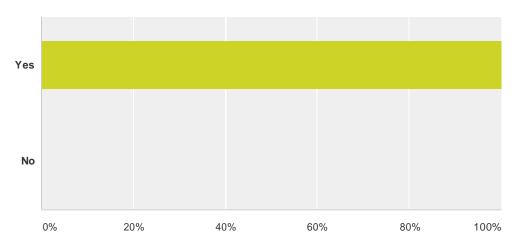
Answered: 205 Skipped: 0



Answer Choices	Responses	
Unlimited (no restrictions)	30.73%	63
Educational (only education purposes)	1.95%	4
Limited (educational purposes, plus other limited uses)	<b>67.32</b> % 1	138
Total	2	205

## Q5 Do you have Internet access at home?

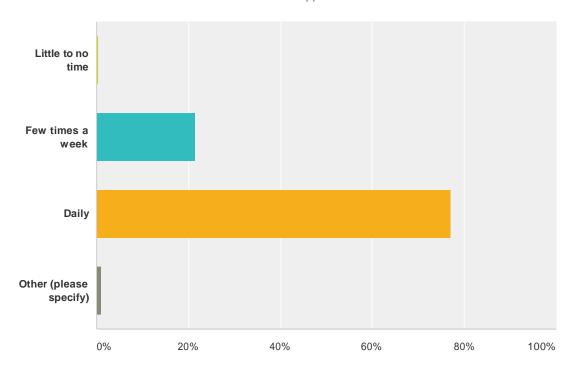
Answered: 203 Skipped: 2



Answer Choices	Responses
Yes	99.01% 201
No	0.99%
Total	203

# Q6 How often does your child(ren) use a technology device at home?

Answered: 205 Skipped: 0

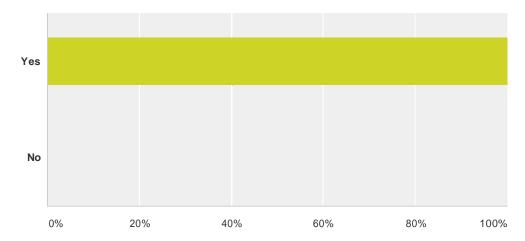


Answer Choices	Responses
Little to no time	<b>0.49</b> %
Few times a week	<b>21.46</b> % 44
Daily	<b>77.07%</b> 158
Other (please specify)	0.98% 2
Total	205

#	Other (please specify)	Date
1	Varies week to week	1/30/2014 11:00 AM
2	Depends on the season and the week. It is mostly a device for the car	1/29/2014 9:53 PM

# Q7 Do you believe technology can be a useful educational tool?

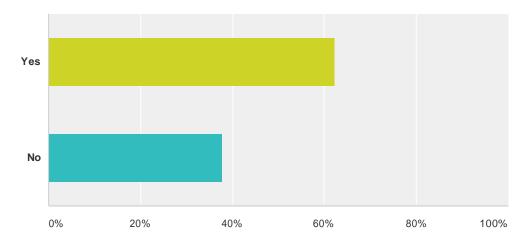
Answered: 202 Skipped: 3



Answer Choices	Responses	
Yes	99.50%	201
No	0.50%	1
Total		202

# Q8 Do you feel your child(ren) have enough access to technology at school?

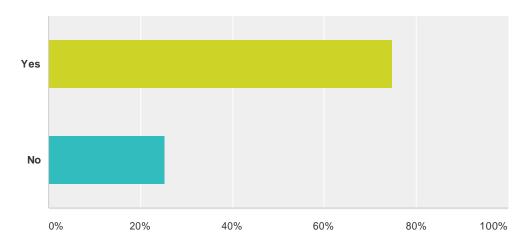
Answered: 198 Skipped: 7



Answer Choices	Responses	
Yes	62.12%	123
No	37.88%	75
Total		198

# Q9 Have you read or heard about other school districts transforming learning through technology?

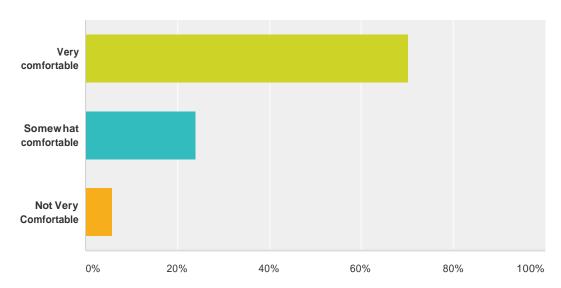
Answered: 202 Skipped: 3



Answer Choices	Responses	
Yes	74.75%	151
No	25.25%	51
Total		202

# Q10 How comfortable do you feel helping your child(ren) navigate technology devices for academic use?

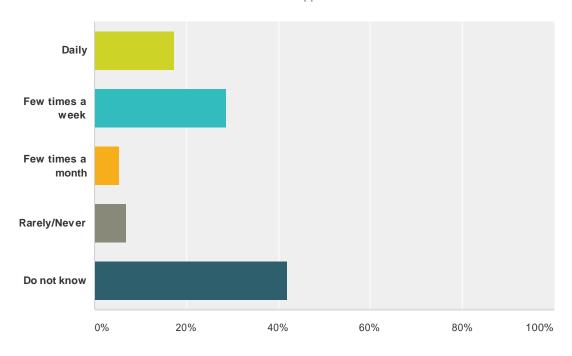
Answered: 204 Skipped: 1



Answer Choices	Responses
Very comfortable	<b>70.10%</b> 143
Somewhat comfortable	<b>24.02%</b> 49
Not Very Comfortable	<b>5.88%</b> 12
Total	204

# Q11 How often does your child(ren) use technology in the classroom?

Answered: 203 Skipped: 2



Answer Choices	Responses
Daily	<b>17.24%</b> 35
Few times a week	<b>28.57%</b> 58
Few times a month	<b>5.42</b> % 11
Rarely/Never	<b>6.90%</b> 14
Do not know	<b>41.87%</b> 85
Total	203

#	Comment	Date
1	Most children are wired to learn through technology. I feel this is one of the best ways to recapture many of the learners that are not inspired by the "standard" teaching tools and thus are not reaching their potential.	2/5/2014 11:09 PM
2	It would be helpful to understand how often and what the children are learning with technology. I would be more comfortable teaching my son at home if I knew the "ground rules" and expectations at school.	2/5/2014 9:23 PM
3	Would like to see Bromfield go to eTextBooks. The hardcovers are killing my daughter's back!	2/5/2014 5:04 PM
4	Learning new technology just for technologies sake is of limited value. This applies to obvious technologies too, in my mind. Teaching kids how to use Powerpoint does not enrich. They will learn that in the future whether they want to or not. Teaching kids how to create meaningful presentations is helpful and if they use Powerpoint then the technology is a tool and not what they are learning. Certain technologies for certain fields of study are as necessary as a hammer is to a carpenter. But that does not apply to every field nor every technology. The technologies to focus on must be selected carefully if the students are to gain lasting value and/or a competitive edge.	2/2/2014 8:23 AM
5	Mostly in the computer class. Not in classrooms.	1/31/2014 8:58 PM

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6	If you mean being part of the smart board use, than "daily" would be my answer. Technology on her own, I think only happens during computer class. I think that for this age group, having time to manipulate actual objects is important. Technology is the future but tactile learning is necessary	1/31/2014 5:11 PM
7	I think they should all get tablets to use so they can bring they're studies home without misplacing anything or having to get set up. It takes time and our kids are learning a lot at a very fast pace. Limit the tablets to only school work and not social networking, etc.	1/30/2014 4:13 PM
8	Meh - Not overly concerned about this. The Smart boards are fine. Other advances that support learning productivity are fine. Tech is just a tool to support the teaching and learning process. No need to put the cart before the horse. It will be impossible for the school district to keep up with devices that are obsoleted in less than 18 months. Develop/obtain/pilot unique Content that can be consumed on a variety of form factors including, heaven forbid, a desktop computer.	1/30/2014 3:32 PM
9	Technology is here to stay. I've been in the business for more than 25 years. It only makes sense to create an environment where the children are growing up with and learning with technology available. Waiting until they enter college or the workforce is way too late. The more they know about technology today, the more competitive they will be in the workplace because they'll be using the technology to do advanced research, to invent, to code rather than figuring out how to just use PowerPoint or a spreadsheet. Those are fundamental requirements of any entry-level knowledge worker position. Let's create an environment where being an engineer is easy (should you decide to want to become an engineer!).	1/30/2014 1:31 PM
10	She may use it more, but she is not an over sharer! I work at school that requires students to have laptops. They connect and collaborate using Google Docs. I know this is a private (middle/upper school) but it is amazing to see what students are doing through technology and collaboration.	1/30/2014 1:09 PM
11	If Smartboards in elementary grades count, then my youngest child is using technology daily at school. At Bromfield, the kids often need access to computers for their work but sometimes it is not available to them. Example: During a study all homework required a computer or internet access but no passes for the library were available because it was booked by a teacher. It would be nice to see more computers available or iPads.	1/30/2014 11:43 AM
12	I would like to see them learn different applications, particularly in the Office suite of applications (Excel, Word, PowerPoint, etc.); and to have more school-based training on how to use the internet for research to couple with the training they receive at home. I would also like to see options in Bromfield for learning computer languages such as Java and C++.	1/30/2014 10:44 AM
13	We would not support a program in which families put up any amount of money to rent or own a lap top to bring home with them. Parents spend too much money as it is already when it comes to HES and Bromfield. If the schools were to finance a program 100% themselves- fine. Do not ask parents to spend more money than they already do.	1/30/2014 10:42 AM
14	I absolutely do NOT support a lap-top rental system that involves parents spending ANY amount of money. I would not agree to "rent" a lap top for my children if it means me putting up money (any amount) and then kids are not allowed to bring it home with them, and we never own it (even after renting it for many years). This goes against a "Free and appropriate public education"- the law. Parents are spending too much money as it is on user fees, field trips (includ Nature's Classroom), school supplies, etc etc. It is not appropriate to ask of parents.	1/30/2014 10:37 AM
15	I have no idea I also have no idea to question 8	1/30/2014 8:01 AM
16	Technology, as in computer mediated education, can supplement but not replace well trained teachers. I am wary of too much computer integration if it is used to replace teachers. Technology costs can also limit other important spending initiatives, such as teacher training, classroom size reduction, and teacher's aides. Computers can enhance good education, but I am wary of seeing them as a panacea for educational issues, and very opposed to computers used to push more one-size-fits-all curricula and teaching to the test curricula.	1/30/2014 7:29 AM
17	Not enough information given below in question #12. I can't really answer it honestly.	1/30/2014 6:53 AM
18	He uses the smartboard, but that's easy and there is no critical thinking involved. He also has computer 'special' which is better but still he's surpassed what he is learningalso not a great use of technology. Last year he took "Scratch" after schoolyes, yes, this is an excellent use of technology and he sees his success right away. More stuff like this, please.	1/29/2014 11:33 PM
19	The technology use varies by grade.	1/29/2014 11:24 PM

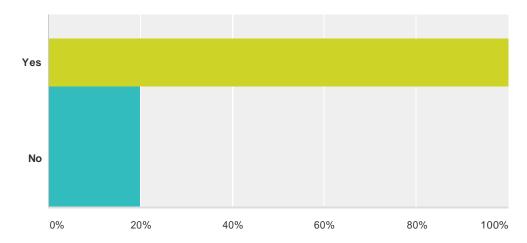
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20	We should not be providing flashy technology for the sake of learning the same thing a different way. What I have in mind is teaching the children how to program, and how to create technology. There are free educator resources, course material, and even stipends available online to help: http://code.org/ and http://code.org/educate Tech can also be used in a bad way. I see teachers using the internet as a crutch for math homework. Instead of assigning and grading math homework, they send our kids to random sites with math problems and games (mostly games). Their progress is not tracked, I don't know how they gain new skills, and they end up wasting time on the computer playing games. It also takes longer to solve math problems on the computer, than it would take on a piece of paper. The bad use of technology in this area is disheartening. As a result, we teach our kids math on our own. This new pilot program will waste time in my opinion and be a distraction, as the focus will be on the tech, and not the work. Unless clear goals are set, obtaining new tech will not result in more learning. And being a pilot program, it is most likely buggy and will not work well until they get the kinks out.	1/29/2014 10:32 PM
21	My children in HES have computers 1x per week. They may help with things on the smart board but I feel if they had access to iPads for lessons etc it would be beneficial. My bromfield student does use technology daily- but it doesn't seem to be up to date/ current programs. Also some programs that he uses ie: projects they work on in computer tech class is not compatible with MAC.	1/29/2014 10:04 PM
22	This is the same answer for question 8 - other then technology class I have no idea what time they have with technology in the classroom	1/29/2014 9:53 PM
23	this is a comment on 12. i don't think it's a huge priority. i don't think kids need more screen time. they need human interaction. i do think there is a need for interaction with technology, of course. but do they need their own device? probably in high school, maybe in middle school, but not in elementary school.	1/29/2014 9:37 PM
24	If the district is to bring in technology for each child I would support that, however I feel very strongly that the teachers must embrace it first and must be comfortable using the teaching tools. They must be trained appropriately or the technology will just become a distraction.	1/29/2014 8:55 PM
25	I think direct use is only in the labs @ HES and if one takes Comm Tech (Comp Tech?) @ Bromfield, but don't really know. I am concerned that there is not enough direct use by students of tools & apps. shouldn't Comm Tech be mandatory for at least a couple of years?	1/29/2014 8:42 PM
26	I am afraid of kids playing too much games online. A lot of parents concern their kids playing games online or chatting online. School teachers need to teach students to use the new technologies for learning purposes.	1/29/2014 8:33 PM
27	I think daily, through use of Smart Board, computers, etc. Below: I feel fine about a 1 to world pilot, but don't feel strongly - I definitely understand the perspective of those who are opposed.	1/29/2014 8:25 PM
28	Computer lab once/wk. Not much use in the classroom.	1/29/2014 8:16 PM
29	In elementary school and middle school I believe it is important to first learn math, reading, and writing skills using traditional methods first and using technology based methods as an extra, not the primary vehicle for learning. I want my children focused on the teacher first and technology second. In high school, using technology as the primary method to learn a new concept seems reasonable.	1/29/2014 8:15 PM
30	Are you asking if the teachers are showing the lesson by power point etc, or are you asking if the students are using their own devices in the classroom?	1/29/2014 8:09 PM
31	Tech is OK but a bit primitive. I am astonished at the paucity of classes teaching more advanced computer skills: coding, writing apps, CAD use, etc.	1/29/2014 6:26 PM
32	I don't think the 6th graders use it much a little in science and in comp tech and for research for homework	1/29/2014 5:00 PM
33	My children have said some teachers don't use their smartboards. Don't know if this is true or not but it is alarming if it's true that teachers are not utilizing technology in the classroom that has already been purchased and is physically there.	1/29/2014 4:39 PM
34	I know that one-to-one is the wave of the future; however, I hope that real research and planning is done at the grade, school and district level as to how this will add value to my child's education before you invest in it. I don't want them to have an iPad just because it makes it easier to practice their math facts or because there are some cool apps that allow students to present what they have learned in a high-tech way. Also, please don't assume that all Harvard families could easily afford to supply their child with a one-to-one device. This is NOT the case.	1/29/2014 4:37 PM

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35	Most children and parents we know in other school districts have all homework assignments and grade results available on-line - for every class and assignment without exception. Harvard seems to be lagging the rest of the country in this respect.	1/29/2014 4:34 PM
36	don't really know but my guess would be a few times a week	1/29/2014 4:12 PM
37	I feel like it would be easier if kids had more access towards technology like being able to use an iPad in class to take notes.	1/29/2014 3:44 PM
38	Need to update the technology when it comes to grading. My kids wait weeks to get an assignment returnedsometimes not knowing where their grade stands until report cards come out. Previous schools use an electronic assignment/grading system so you always know where you standhelps motivate teachers to grade in a timely manner, kids have assignment reminders and parents have a clue as to how their kids are doing. This is not a hovering tool for parents, this is being with the times and automating this process. Most surrounding schools I've spoken to have this. Check out gradespeed.com.	1/29/2014 3:20 PM
39	My daughter uses the computer at home for homework or school projects 3-5x week, and use has accelerated as she has moved up each grade level. She is proficient in MS Word; a beginner in MS Powerpoint, and just learned MS Excel for her science fair project. She does not use a dictionary or encyclopedia the Web is her reference. Formal training on the fundamental software apps (Word,PP, XL) for all students would be helpful and save parents' time.	1/29/2014 3:05 PM
40	It is there, not sure of frequency	1/29/2014 2:56 PM
41	Teach the teachers Please !	1/29/2014 2:41 PM

Q12 1 to World is defined as: A technology device for each participating student for learning and demonstrating knowledge. ----

# Would you support the district participating in a 1 to world technology limited pilot program?

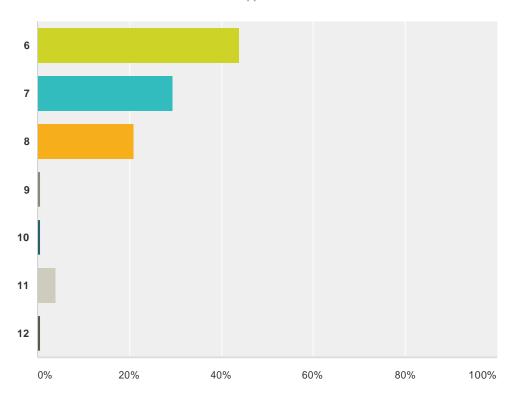
Answered: 198 Skipped: 7



Answer Choices	Responses
Yes	<b>85.86%</b> 170
No	<b>14.14%</b> 28
Total	198

### Q1 What grade are you in?

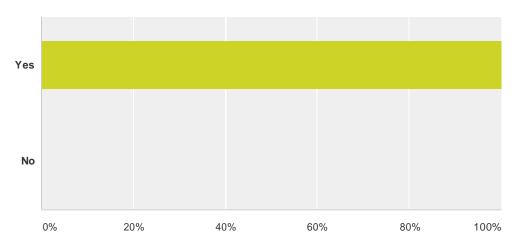
Answered: 153 Skipped: 0



Answer Choices	Responses	
6	43.79%	67
7	29.41%	45
8	20.92%	32
9	0.65%	1
10	0.65%	1
11	3.92%	6
12	0.65%	1
Total		153

## Q2 Do you have Internet access at home?

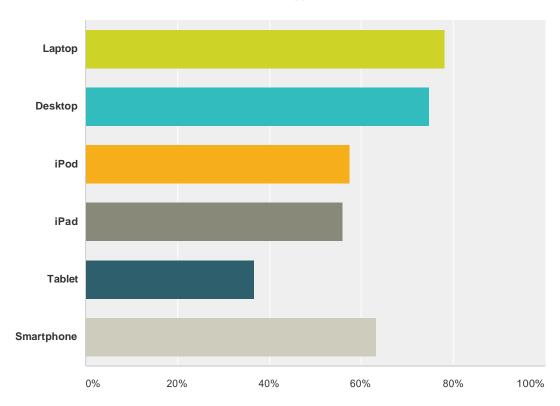
Answered: 152 Skipped: 1



Answer Choices	Responses
Yes	99.34%
No	0.66%
Total	152

## Q3 What tech do you have at home?

Answered: 150 Skipped: 3



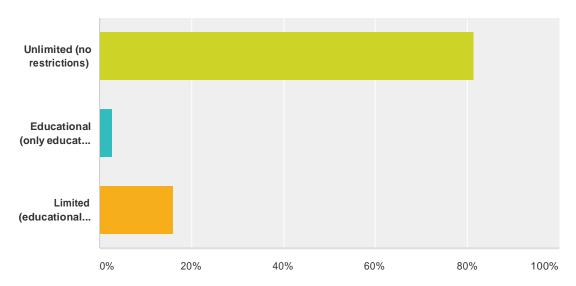
Answer Choices	Responses
Laptop	<b>78%</b> 117
Desktop	<b>74.67%</b> 112
iPod	<b>57.33%</b> 86
iPad	<b>56.00%</b> 84
Tablet	<b>36.67%</b> 55
Smartphone	<b>63.33%</b> 95
Total Respondents: 150	

#	Other (please specify)	Date
1	imac	1/31/2014 12:52 PM
2	iPhone	1/31/2014 11:40 AM
3	imac	1/31/2014 11:35 AM
4	tv	1/31/2014 11:34 AM
5	phone	1/31/2014 9:36 AM
6	iPhone5s MacBook MacBookAir iMac	1/31/2014 9:35 AM
7	Iphone	1/31/2014 9:34 AM
8	Sonic ScrewDriver	1/31/2014 7:56 AM
9	The Tardis	1/31/2014 7:56 AM

10	Surface PC	1/31/2014 7:55 AM
11	Track Phone	1/31/2014 7:54 AM
12	fax machine, printing press, electric stove, telephone, food processor, radio, typewriter.	1/30/2014 1:56 PM
13	I have a camera and a desktop a really old thing that plays music that's all.(No phones, Nothing else)	1/30/2014 1:40 PM
14	xbox360,tv,playstation3/4,ds ,dsi	1/30/2014 1:39 PM
15	Wii	1/30/2014 1:38 PM
16	Xbox (i don't really use)	1/30/2014 1:38 PM
17	xbox 360	1/30/2014 1:38 PM
18	Gaming consoles	1/30/2014 1:37 PM
19	camera	1/30/2014 1:37 PM
20	iMac	1/30/2014 1:37 PM
21	game consoles	1/30/2014 9:34 AM
22	Xbox, Xbox360	1/30/2014 9:34 AM
23	Xbox 360, Nintendo 64, wii, 3DS, playstation 3	1/30/2014 9:34 AM
24	Gameboy Advance SP	1/30/2014 9:32 AM
25	gaming system	1/30/2014 9:32 AM
26	mac	1/30/2014 9:31 AM
27	Apple TV	1/30/2014 9:31 AM
28	radio	1/30/2014 8:44 AM
29	i have a printer that works 12% of the time	1/30/2014 7:59 AM
30	Toaster Oven, TV, Refrigerator, Lightbulbs, Combustion Engines, Cars	1/30/2014 7:58 AM
31	The wheel, fire, agriculture, combustion engines, etc.	1/30/2014 7:57 AM
32	Toaster, microwave, dishwasher, television, stove, lights, car, doors, roof, heating, Air Conditioning unit, beds, pillows,	1/30/2014 7:57 AM
33	Over, Dishwasher, Washing Maching, Microwave, Toaster, Television, Stove, Lights, Car, Truck, Doors, Roofs, Heater, Air Condition, Beds, Pillows	1/30/2014 7:57 AM

# Q4 If you have technology at home, what type of restrictions do you have?

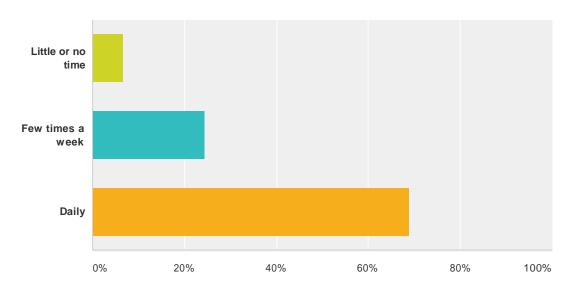
Answered: 150 Skipped: 3



Answer Choices	Responses	
Unlimited (no restrictions)	81.33%	122
Educational (only education purposes)	2.67%	4
Limited (educational purposes, plus other limited uses)	16%	24
Total		150

# Q5 About how much time do you spend use your technology at home?

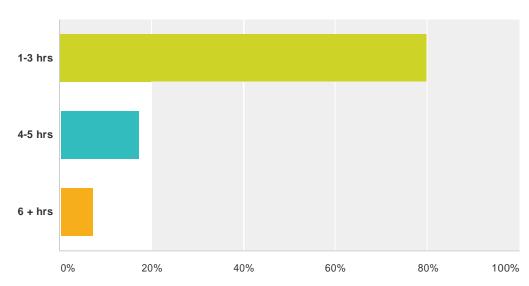
Answered: 151 Skipped: 2



Answer Choices	Responses	
Little or no time	6.62%	10
Few times a week	24.50%	37
Daily	68.87%	104
Total		151

# Q6 If daily, how much time per day do you spend using technology at home?

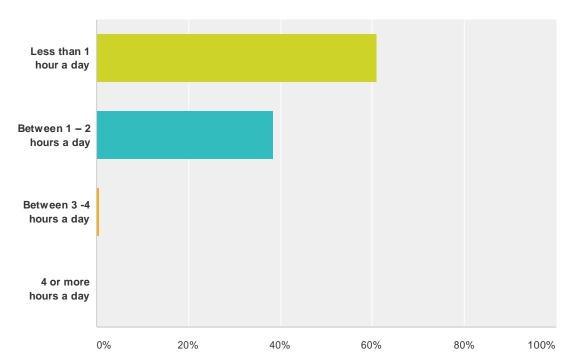




Answer Choices	Responses
1-3 hrs	<b>75.71%</b> 106
4-5 hrs	<b>17.14%</b> 24
6 + hrs	<b>7.14%</b> 10
Total	140

# Q7 How much time do you spend doing homework using your technology?

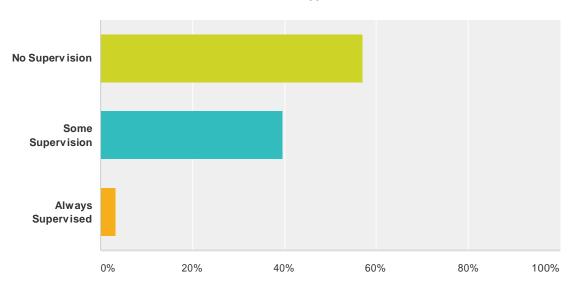




Answer Choices	Responses	
Less than 1 hour a day	60.93%	92
Between 1 – 2 hours a day	38.41%	58
Between 3 -4 hours a day	0.66%	1
4 or more hours a day	0%	0
Total		151

# Q8 How much supervision do you get when you are online?

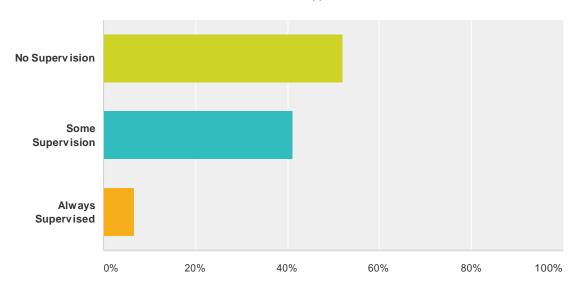
Answered: 151 Skipped: 2



Answer Choices	Responses
No Supervision	<b>56.95%</b> 86
Some Supervision	<b>39.74%</b> 60
Always Supervised	<b>3.31%</b> 5
Total	151

# Q9 How much supervision do you get when you are online?

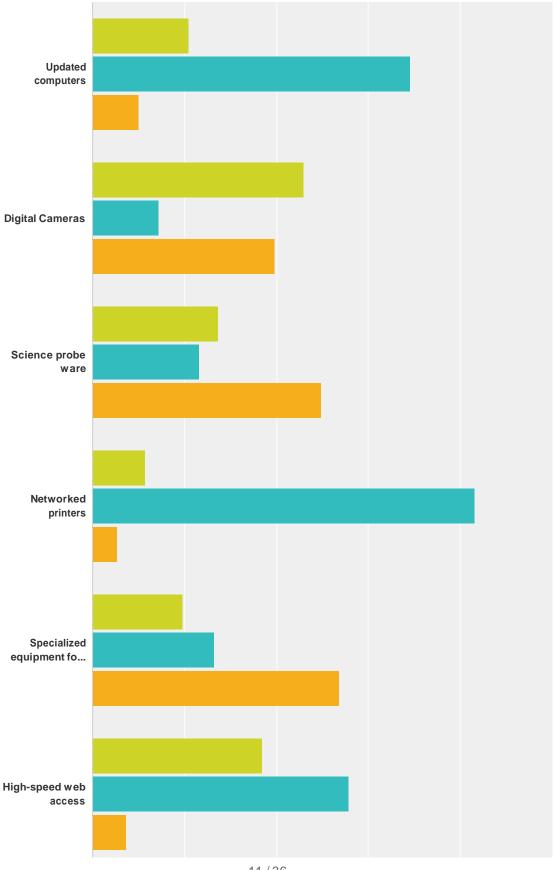
Answered: 148 Skipped: 5

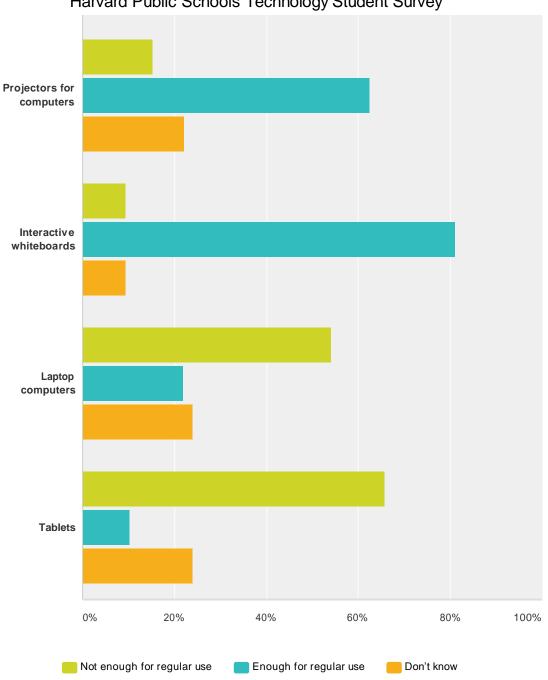


Answer Choices	Responses	
No Supervision	52.03%	77
Some Supervision	41.22%	61
Always Supervised	6.76%	10
Total		148

# Q10 Are there sufficient quantities of the following tools in your school to allow use on a regular basis for learning activities?

Answered: 150 Skipped: 3





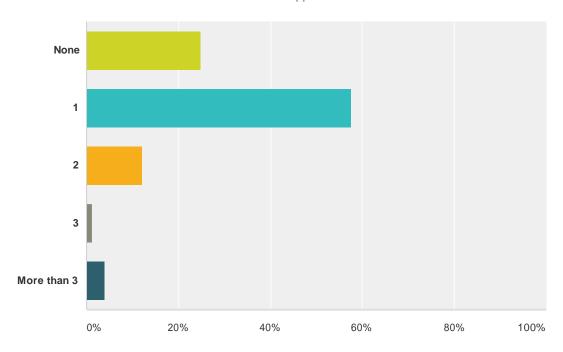
	Not enough for regular use	Enough for regular use	Don't know	Tota
Updated computers	20.81%	69.13%	10.07%	
	31	103	15	149
Digital Cameras	45.89%	14.38%	39.73%	
	67	21	58	146
Science probe ware	27.27%	23.08%	49.65%	
	39	33	71	143
Networked printers	11.49%	83.11%	5.41%	
	17	123	8	148
Specialized equipment for special needs students (assistive	19.73%	26.53%	53.74%	
technology)	29	39	79	147

High-speed web access	36.91%	55.70%	7.38%	
	55	83	11	149

Projectors for computers	<b>15.28%</b> 22	<b>62.50%</b> 90	<b>22.22%</b> 32	144
Interactive whiteboards	<b>9.46%</b> 14	<b>81.08%</b> 120	<b>9.46%</b> 14	148
Laptop computers	<b>54.11%</b> 79	<b>21.92%</b> 32	<b>23.97%</b> 35	146
Tablets	<b>65.75%</b> 96	<b>10.27%</b> 15	<b>23.97%</b> 35	146

# Q11 How many computers are in most of your classrooms?

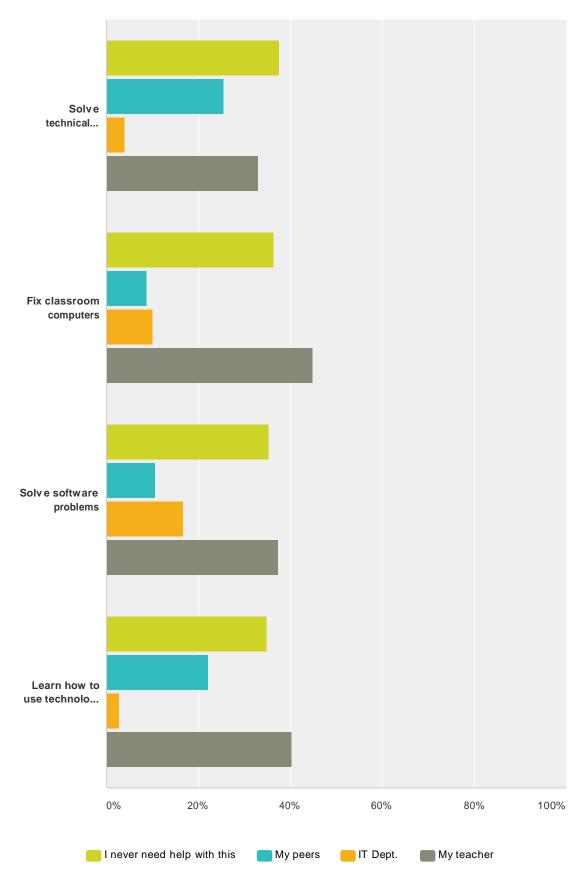
Answered: 149 Skipped: 4



Answer Choices	Responses	
None	24.83%	37
1	57.72%	86
2	12.08%	18
3	1.34%	2
More than 3	4.03%	6
Total		149

# Q12 Where do you mostly turn for help with technology when you need it?

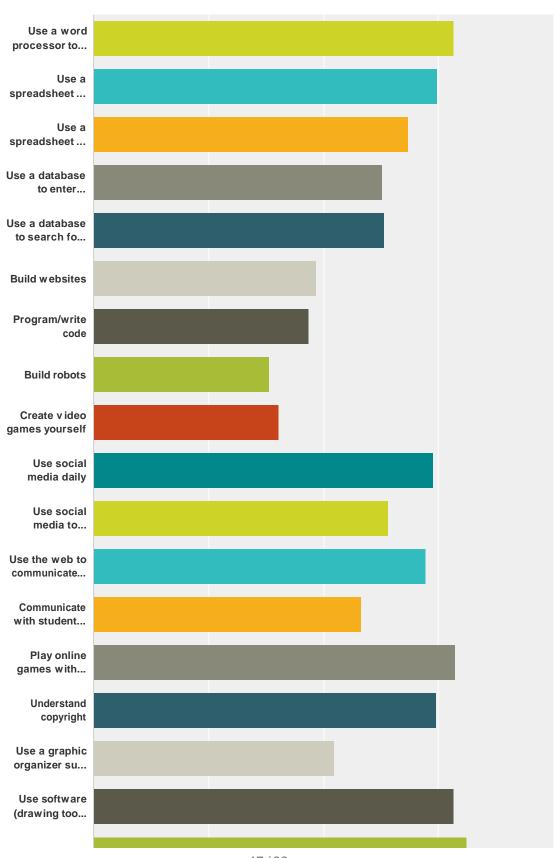
Answered: 151 Skipped: 2

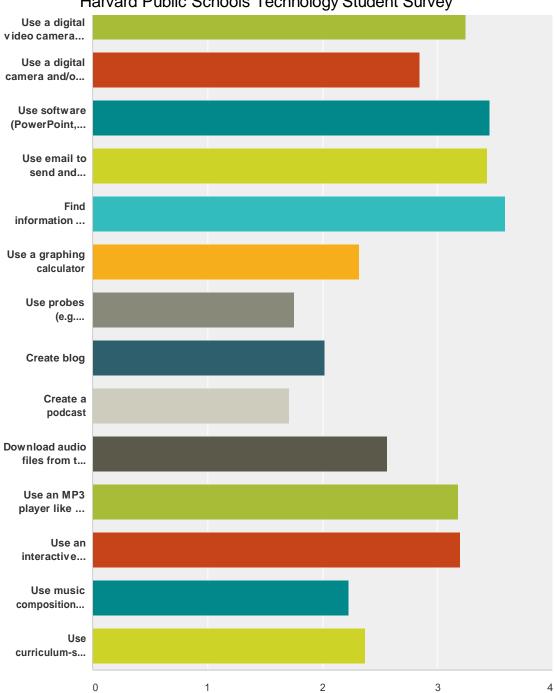


	57		,		
	I nev er need help with this	My peers	IT Dept.	My teacher	Total
Solve technical problems with the network	37.58%	25.50%	4.03%	32.89%	
	56	38	6	49	149
Fix classroom computers	36.24%	8.72%	10.07%	44.97%	
	54	13	15	67	149
Solve software problems	35.33%	10.67%	16.67%	37.33%	
	53	16	25	56	150
Learn how to use technology tools in your classroom	34.90%	22.15%	2.68%	40.27%	
	52	33	4	60	149

Q13 Using a scale of 1 to 4 (1: You don't how to do this, 2: You kind of how to do this, 3: You know how to do this, 4: You are an expert at using technology)

Answered: 151 Skipped: 2





	You don't how to do this	You kind of how to do this	You know how to do this	You are an expert at using technology	Total	Average Rating
Use a word processor to create	10.07%	6.71%	42.95%	40.27%		
documents	15	10	64	60	149	3.13
Use a spreadsheet to enter and calculate	2.65%	20.53%	52.32%	24.50%		
numbers	4	31	79	37	151	2.99
Use a spreadsheet to create graphs	9.27%	29.80%	39.07%	21.85%		
	14	45	59	33	151	2.74
Use a database to enter information	22.82%	23.49%	33.56%	20.13%		
	34	35	50	30	149	2.51
Use a database to search for and sort	22.82%	24.16%	30.20%	22.82%		
information and create	34	36	45	34	149	2.53
Build websites	42.95%	29.53%	18.12%	9.40%		

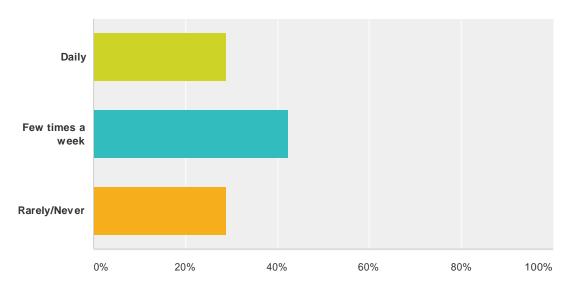
i iai vai	a i abiic Scrit	JOIS TECHNOLO	gy Student S	ui vey		
	64	44	27	14	149	1.94
Program/write code	<b>49.33%</b> 74	<b>24%</b> 36	<b>17.33%</b> 26	<b>9.33%</b>	150	1.87
Build robots	<b>66%</b> 99	<b>18.67%</b> 28	<b>12%</b> 18	<b>3.33%</b> 5	150	1.53
Create video games yourself	<b>62.91%</b> 95	<b>19.21%</b> 29	<b>11.92%</b>	<b>5.96%</b> 9	151	1.61
Use social media daily	<b>15.89%</b> 24	<b>11.92%</b> 18	<b>32.45%</b> 49	<b>39.74%</b> 60	151	2.96
Use social media to collaborate on homework	<b>26.85%</b> 40	<b>13.42%</b> 20	<b>36.24%</b> 54	<b>23.49%</b> 35	149	2.56
Use the web to communicate using audio or video chat	<b>12.67%</b> 19	<b>21.33%</b> 32	<b>30%</b> 45	<b>36%</b> 54	150	2.89
Communicate with students in other parts of the world	<b>35.10%</b> 53	<b>17.88%</b> 27	<b>25.83%</b> 39	<b>21.19%</b> 32	151	2.33
Play online games with others near and in other parts of the world	<b>8.67%</b> 13	<b>16%</b> 24	<b>27.33%</b> 41	<b>48%</b> 72	150	3.15
Understand copyright	<b>10%</b> 15	<b>18%</b> 27	<b>36%</b> 54	<b>36%</b> 54	150	2.98
Use a graphic organizer such as Inspiration	<b>38.93%</b> 58	<b>21.48%</b> 32	<b>30.20%</b> 45	<b>9.40%</b> 14	149	2.10
Use software (drawing tools in Word, Photoshop, etc to enhance content)	<b>4.67%</b> 7	<b>16.67%</b> 25	<b>40%</b> 60	<b>38.67%</b> 58	150	3.1
Use a digital video camera to make a video	<b>4.67%</b> 7	<b>14.67%</b> 22	<b>32%</b> 48	<b>48.67%</b> 73	150	3.2
Use a digital camera and/or scanner to get images into the computer	<b>14.67%</b> 22	<b>19.33%</b> 29	<b>32%</b> 48	<b>34%</b> 51	150	2.8
Use software (PowerPoint, etc.) to create presentations	<b>1.35%</b> 2	<b>8.11%</b> 12	<b>33.78%</b> 50	<b>56.76%</b> 84	148	3.4
Use email to send and receive messages	<b>5.33%</b> 8	<b>10%</b> 15	<b>21.33%</b> 32	<b>63.33%</b> 95	150	3.4
Find information on the Internet	<b>2.03%</b> 3	<b>4.05%</b> 6	<b>26.35%</b> 39	<b>67.57%</b> 100	148	3.5
Use a graphing calculator	<b>36.24%</b> 54	<b>20.81%</b> 31	<b>18.12%</b> 27	<b>24.83%</b> 37	149	2.3
Use probes (e.g. temperature sensor, motion detector)	<b>56.00%</b> 84	<b>22.67%</b> 34	<b>12%</b> 18	<b>9.33%</b> 14	150	1.7
Create blog	<b>47.33%</b> 71	<b>18%</b> 27	<b>20%</b> 30	<b>14.67%</b> 22	150	2.0
Create a podcast	<b>58.94%</b> 89	<b>20.53%</b> 31	<b>11.26%</b>	<b>9.27%</b> 14	151	1.7
Download audio files from the Internet	<b>27.33%</b> 41	<b>20%</b> 30	<b>22%</b> 33	<b>30.67%</b> 46	150	2.5
Use an MP3 player like an iPod	<b>16.67%</b> 25	<b>4.67%</b> 7	<b>22.67%</b> 34	<b>56.00%</b> 84	150	3.1
Use an interactive whiteboard such as SmartBoard	<b>6%</b> 9	<b>10.67%</b> 16	<b>40.67%</b> 61	<b>42.67%</b> 64	150	3.2
Use music composition software such as GarageBand	<b>39.46%</b> 58	<b>17.69%</b> 26	<b>23.13%</b> 34	<b>19.73%</b> 29	147	2.2
Use curriculum-specific software	29.80%	21.19%	31.13%	17.88%		

19/36

Harva	rd Public Scl	hools Techno	ology Student	Survey		
	45	32	47	27	151	2.37

## Q14 About how much time each week do you use technology in your classroom?

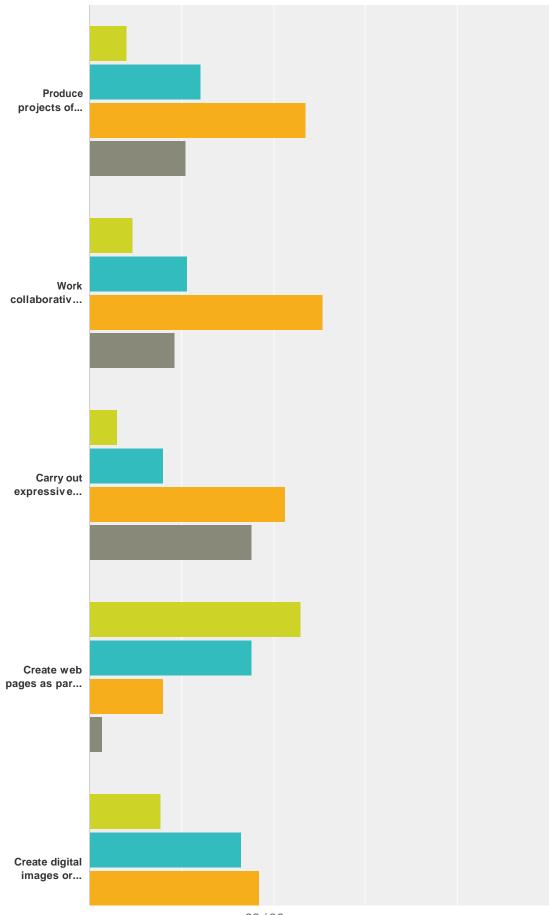
Answered: 146 Skipped: 7

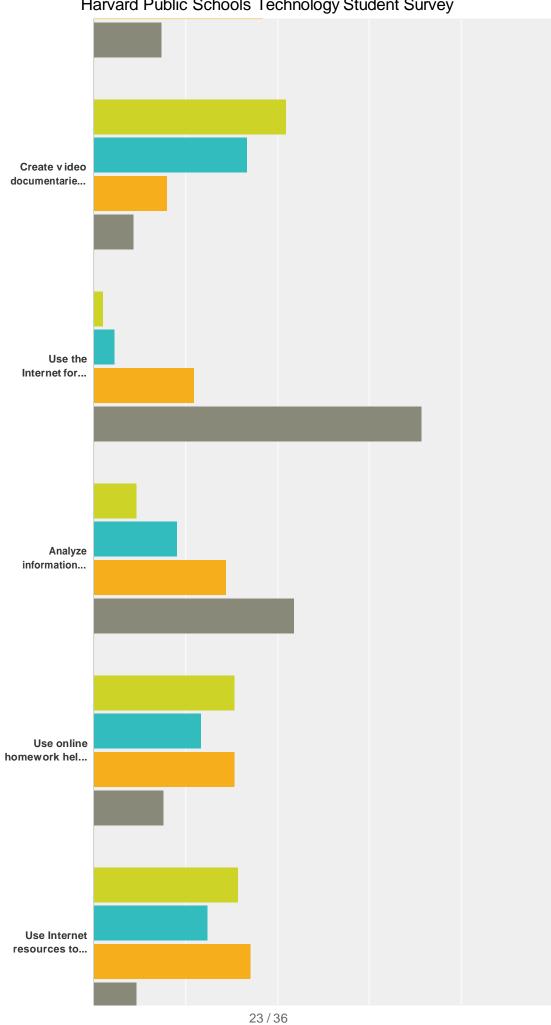


Answer Choices	Responses
Daily	<b>28.77%</b> 42
Few times a week	<b>42.47%</b> 62
Rarely/Never	<b>28.77%</b> 42
Total	146

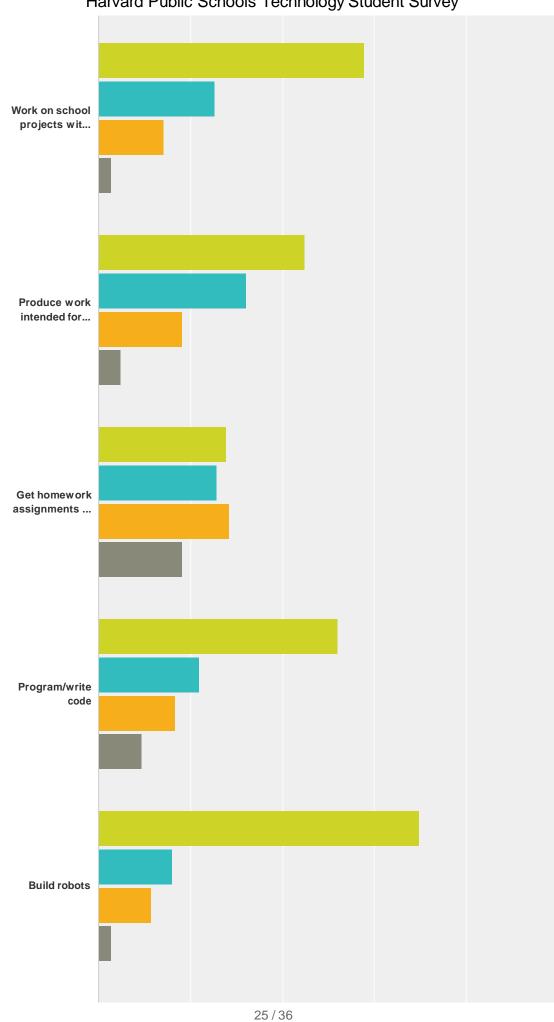
### Q15 How often do you use technology to:

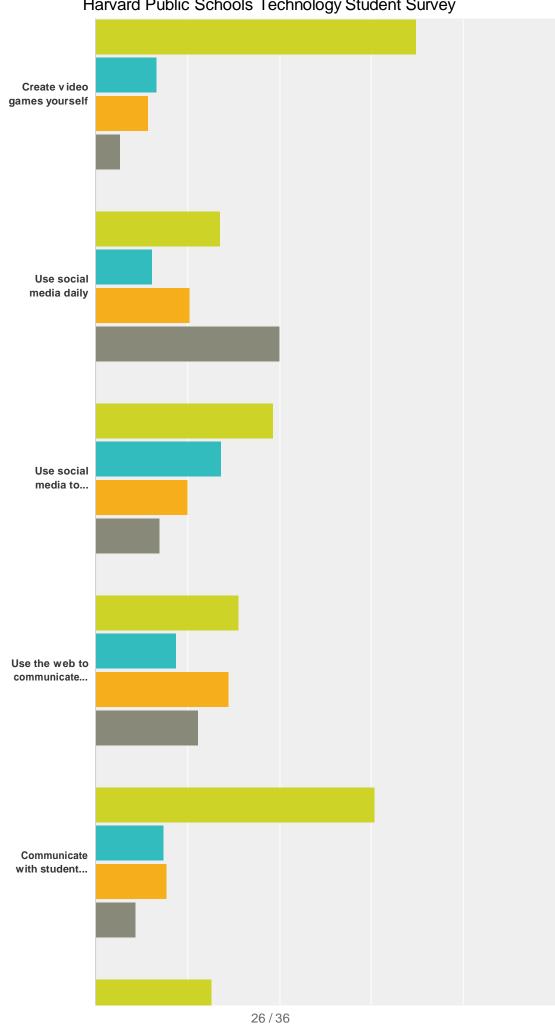
Answered: 150 Skipped: 3

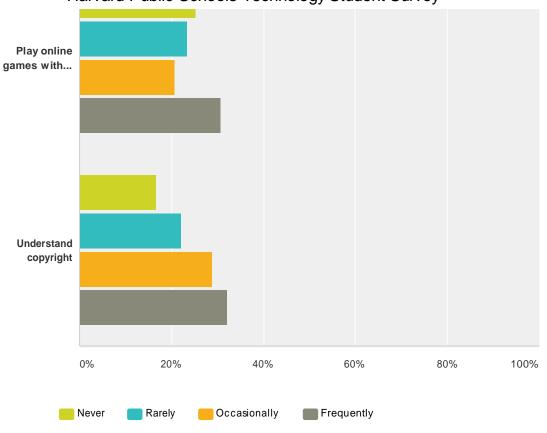




Harvard Public Schools Technology Student Survey Improve your math skills Improve your reading skills Improve your writing skills Communicate electronically Talk with experts outs...





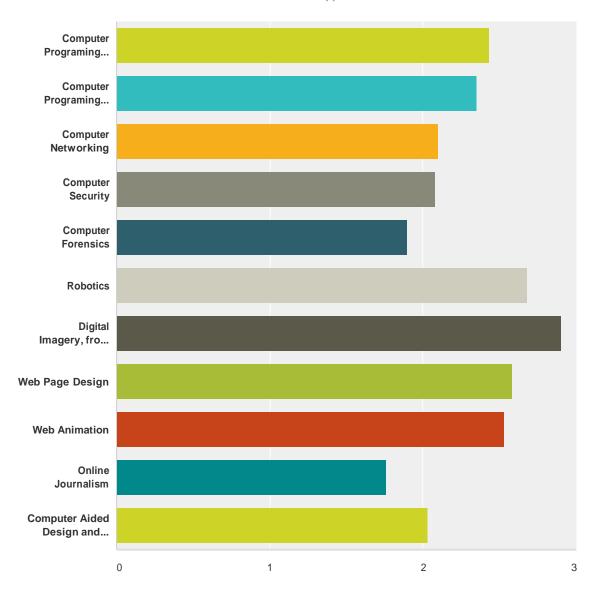


	Nev er	Rarely	Occasionally	Frequently	Total
Produce projects of your own design	8.05%	24.16%	46.98%	20.81%	
	12	36	70	31	149
Work collaboratively with other students on projects	9.33%	21.33%	50.67%	18.67%	
	14	32	76	28	150
Carry out expressive writing assignments	6%	16%	42.67%	35.33%	
	9	24	64	53	150
Create web pages as part of your classwork	46%	35.33%	16%	2.67%	
	69	53	24	4	150
Create digital images or graphs to illustrate your work	15.44%	32.89%	36.91%	14.77%	
	23	49	55	22	149
Create video documentaries or animations for school projects	42%	33.33%	16%	8.67%	
	63	50	24	13	150
Use the Internet for research	2%	4.67%	22%	71.33%	
	3	7	33	107	150
Analyze information found on the web	9.40%	18.12%	28.86%	43.62%	
	14	27	43	65	149
Use online homework help sites or software	30.67%	23.33%	30.67%	15.33%	
	46	35	46	23	150
Use Internet resources to predict real work changes (for class projects)	31.54%	24.83%	34.23%	9.40%	
	47	37	51	14	149
Improve your math skills	38%	24.67%	26.67%	10.67%	
	57	37	40	16	150
Improve your reading skills	41.33%	23.33%	24.67%	10.67%	
	62	35	37	16	150
Improve your writing skills	36.24%	24.83%	26.17%	12.75%	
	54	37	39	19	149

Communicate electronically	13.42%	13.42%	28.19%	44.97%	
	20	20	42	67	149
Talk with experts outside the school using email	58.78%	24.32%	12.84%	4.05%	
	87	36	19	6	148
Workon school projects with adults from the community	57.82%	25.17%	14.29%	2.72%	
	85	37	21	4	147
Produce work intended for audiences beyond the classroom	44.97%	32.21%	18.12%	4.70%	
	67	48	27	7	149
Get homework assignments for your teacher's website	27.70%	25.68%	28.38%	18.24%	
	41	38	42	27	148
Program/write code	52%	22%	16.67%	9.33%	
	78	33	25	14	150
Build robots	69.80%	16.11%	11.41%	2.68%	
	104	24	17	4	149
Create video games yourself	69.80%	13.42%	11.41%	5.37%	
	104	20	17	8	149
Use social media daily	27.21%	12.24%	20.41%	40.14%	
	40	18	30	59	147
Use social media to collaborate on homework	38.67%	27.33%	20%	14.00%	450
	58	41	30	21	150
Use the web to communicate using audio or video chat	31.08%	<b>17.57%</b> 26	29.05%	22.30%	4.40
	46	26	43	33	148
Communicate with students in other parts of the world	60.81%	14.86%	15.54%	8.78%	4.40
	90	22	23	13	148
Play online games with others near and in other parts of the world	25.33%	23.33%	20.67%	<b>30.67%</b>	450
	38	35	31	46	150
Understand copyright	16.78%	22.15%	28.86%	32.21%	
	25	33	43	48	149

Q16 Using a scale of 1 to 4 (1: Not Interested, 2: Kind of Interested, 3: Interested, 4: Very Interested), please indicate your level of interest in the following courses:

Answered: 148 Skipped: 5

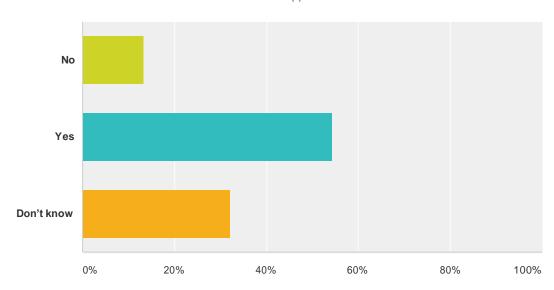


Not Interested	Kind of Interested	Interested	Very Interested	Total	Average Rating
28.38%	27.70%	16.89%	27.03%		
42	41	25	40	148	2.43
35.81%	18.92%	19.59%	25.68%		
53	28	29	38	148	2.35
37.41%	30.61%	16.33%	15.65%		
55	45	24	23	147	2.10
40.14%	29.25%	12.93%	17.69%		
59	43	19	26	147	2.08
	35.81% 53 37.41% 55 40.14%	Interested         Interested           28.38%         27.70%           42         41           35.81%         18.92%           53         28           37.41%         30.61%           55         45           40.14%         29.25%	Interested         Interested           28.38%         27.70%         16.89%           42         41         25           35.81%         18.92%         19.59%           53         28         29           37.41%         30.61%         16.33%           55         45         24           40.14%         29.25%         12.93%	Interested         Interested         Interested           28.38%         27.70%         16.89%         27.03%           42         41         25         40           35.81%         18.92%         19.59%         25.68%           53         28         29         38           37.41%         30.61%         16.33%         15.65%           55         45         24         23           40.14%         29.25%         12.93%         17.69%	Interested         Interested           28.38%         27.70%         16.89%         27.03%           42         41         25         40         148           35.81%         18.92%         19.59%         25.68%         38         148           37.41%         30.61%         16.33%         15.65%         24         23         147           40.14%         29.25%         12.93%         17.69%         17.69%

Computer Forensics	54.11%	19.18%	8.90%	17.81%		
	79	28	13	26	146	1.90
Robotics	23.65%	20.27%	20.95%	35.14%		
	35	30	31	52	148	2.68
Digital Imagery, from Photos to Movies	13.79%	19.31%	29.66%	37.24%		
	20	28	43	54	145	2.9
Web Page Design	21.77%	24.49%	27.89%	25.85%		
	32	36	41	38	147	2.5
Web Animation	27.40%	19.86%	24.66%	28.08%		
	40	29	36	41	146	2.53
Online Journalism	58.11%	20.95%	7.43%	13.51%		
	86	31	11	20	148	1.70
Computer Aided Design and Drafting	46.94%	21.77%	12.24%	19.05%		
(CADD)	69	32	18	28	147	2.0

## Q17 Do you think the Internet safe-guards are sufficient in your school?





Answer Choices	Responses	
No	13.42%	20
Yes	54.36%	81
Don't know	32.21%	48
Total		149

## Q18 What suggestions do you have to improve technology in our school system?

Answered: 123 Skipped: 30

#	Responses	Date
1	connect to home	1/31/2014 1:12 PM
2	I dont know	1/31/2014 1:12 PM
3	I think we should be allowed to use tech more often, we don't ever get to use it except in comp tech. Also, there should be a lot less websites blocked.	1/31/2014 1:11 PM
4	Make a folder for each grade on the programs we use	1/31/2014 1:08 PM
5	tone down the safe-guards	1/31/2014 1:06 PM
6	I think in the class rooms there should be more opertunities to use the internet and be able to have acses to technology	1/31/2014 1:06 PM
7	Don't block as many websights. Yesterday all the websights I tried to go on to for a project were blocked.	1/31/2014 1:06 PM
8	i think we should have a mobile laptop carts so teachers can let students work on their projects in school, and introduce some kids to new things like programming.	1/31/2014 1:06 PM
9	teach us how to do things we're more interested in.	1/31/2014 1:06 PM
10	nothing	1/31/2014 1:05 PM
11	more creativeity	1/31/2014 1:04 PM
12	give each student an ipad for educational uses. but they get to keep it in the end.	1/31/2014 1:02 PM
13	i think that they should keep at least one desktop in a classroom.	1/31/2014 1:01 PM
14	Well all we get to use computers is the teachers and us in comp. tech class so we rarely use it in school.	1/31/2014 12:58 PM
15	I dunno	1/31/2014 12:01 PM
16	have everyone to have free wi-fi access, don't block so many sites, lessons how to build a computer, lessons to build games and sites, and to conect xbox to computers	1/31/2014 11:59 AM
17	dont block too many websites. Have free access to wifi not a passcode on guest wifi.	1/31/2014 11:58 AM
18	Better Wifi, Fast Wifi, Faster computers, Hard wire every computer, Have school ipads so students can use in class for imformation, have a school tv about news in the school like HES, dont block to many websites were old enough to see anything. everyone to have access to wifi so people can go online and do stuff	1/31/2014 11:57 AM
19	I think we should keep it the same because children spend most of their time on the internet and if we go on the computer at school a lot it could hurt our eyes and be the same every day (boring)	1/31/2014 11:52 AM
20	Let Us Say Minecraft!	1/31/2014 11:52 AM
21	DO MORE ROBOTICS	1/31/2014 11:50 AM
22	Ipads and ditigal locker codes	1/31/2014 11:48 AM
23	my suggestion is to add more updated computers, tablets, and other multimedia	1/31/2014 11:48 AM
24	I do not know	1/31/2014 11:47 AM
25	nothing	1/31/2014 11:47 AM
26	Having less paper and using more technology. Like all of us using tablets to do homework on.	1/31/2014 9:52 AM
27	That the web should be a little faster.	1/31/2014 9:52 AM

	narvard Public Schools Technology Student Survey	
28	Give more access to students and don't restrict websites that can be used for reasearch	1/31/2014 9:49 AM
29	Make more fun computer programs.	1/31/2014 9:47 AM
30	More programming. Not just scratch, such as Java Script, Java Also more time available on computers. Also a programming course for a younger age.	1/31/2014 9:47 AM
31	Remove some blocked websites	1/31/2014 9:47 AM
32	Ger more computers for the individual classes.	1/31/2014 9:46 AM
33	Loosen up on some security. Although yes, some sites students shouldn't go on, there are a lot of pages that are blocked unnecessarily, such as some games. Seriously, not everyone is going to use the games in class.	1/31/2014 9:46 AM
34	Less computer homework because it creates a lot of stress and wastes time.	1/31/2014 9:45 AM
35	Get better computers in the learning center and the learning center.	1/31/2014 9:44 AM
36	We should learn how to use animation on Java script and/or scratch	1/31/2014 9:43 AM
37	maybe assign more powerpoints and/or presentations	1/31/2014 9:43 AM
38	Nothing	1/31/2014 9:42 AM
39	I think that we should unblock some of the websites because some are good for research.	1/31/2014 9:42 AM
40	Apple products	1/31/2014 9:42 AM
41	try to block less sites because sometimes i try to find a website for studying and the website is blocked	1/31/2014 9:41 AM
42	use apple computers	1/31/2014 9:41 AM
43	Newer computers in front of library	1/31/2014 8:07 AM
44	Get new computers for the front of the library they're at the point where you can even login without it taking 10 mins and the monitors are kinda broken too.	1/31/2014 8:05 AM
45	Have all the computers wear hats so they know how to have some dignity in what they do	1/31/2014 8:05 AM
46	do not put a block on all websites students go on, for example, dropbox is blocked and sometimes i use it for school	1/31/2014 8:05 AM
47	Nothing really, and I don't think anything needs to be added either, don't get all fancy and get things like tablets and laptops, use the money on things that you guys don't put much effort in, sports for example. Though I may be a frequent user on the computer, do something that will last longer with the money the school currently has to spend.	1/31/2014 8:04 AM
48	We should get more sites to help research projects, because they (my school) has restricted many sites	1/31/2014 8:03 AM
49	Unkown	1/31/2014 8:03 AM
50	None	1/31/2014 8:02 AM
51	Have/make students know how write code	1/31/2014 8:01 AM
52	let 6th graders use laptops in class for things.	1/30/2014 2:02 PM
53	Learning how to make cool videos.	1/30/2014 2:01 PM
54	It would be nice if the school had one of those fancy machines that works like a heater but makes hot air cold in the Summertime.	1/30/2014 1:58 PM
55	faster internet and better websites + can we play more video games?	1/30/2014 1:55 PM
56	Update the old software like Windows generations to Windows 8	1/30/2014 1:52 PM
57	to upgrade the computers	1/30/2014 1:52 PM
58	N/A	1/30/2014 1:51 PM
59	Maybe we could get iPads to help with some of the projects on the go. Also sometimes the computer internet is a little too restrictive it may lock you computer for something that doesn't make	1/30/2014 1:51 PM

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60	I can't really think of any.	1/30/2014 1:51 PM
61	I think more use of SmartBoards and computers in classrooms would be a great way to improve technology.	1/30/2014 1:51 PM
62	?	1/30/2014 1:50 PM
63	none	1/30/2014 1:50 PM
64	Nothing	1/30/2014 1:46 PM
65	I don't have any suggestions	1/30/2014 1:46 PM
66	none	1/30/2014 1:46 PM
67	get I pads so kids can save paper and do all work on them	1/30/2014 1:45 PM
68	we should have ipads to use with Microsoft word read book and take them back and fourth to and from school	1/30/2014 1:15 PM
69	we should get ipads!!! my cousins have ipads at there school and all they need to bring to class is a ipad and a pencil. And we would safe paper.	1/30/2014 1:15 PM
70	faster computers in the library	1/30/2014 1:14 PM
71	That we do more things technology related so that the kids get more attention (from the internet), and the teachers don't have to run around trying to give everyone 1 on 1 attention. (So lesson and then homework on the tablet.)	1/30/2014 1:13 PM
72	to have the school tell the kids who have ipads and can use them for school bring them in and lend out ipads to the kids who don't have ipads they can use	1/30/2014 1:13 PM
73	none	1/30/2014 1:13 PM
74	I think linking the schools computers to the students computers and tablets would benefit for the students in many ways	1/30/2014 1:12 PM
75	to make things a little more exciting, don't let them be bored, keep them engadged	1/30/2014 1:10 PM
76	make it quicker. but use paper more often	1/30/2014 1:10 PM
77	i would like if our school would use more technology	1/30/2014 1:10 PM
78	We should use more technology in the classroom because the internet and other things like that are very modern and we should learn to do things in a modernly	1/30/2014 1:10 PM
79	We should get laptops for everyone use tablets instead of papers kindles/nooks for reading	1/30/2014 1:09 PM
80	I think that we should use computers more in ELA to write on google drive, the only place I use a lot of technology is in Com.tech. If we are going to get more technology we should start to use more technology in our class curriculum because if we don't use them then there is no point in having them.	1/30/2014 1:05 PM
81	I think our technology is just fine.	1/30/2014 1:04 PM
82	We need to be able to have more freedom on technology	1/30/2014 12:58 PM
83	We should have tablets (ipads) or (Nexus tabletes) to improve our learning capabilities for each subject. Also there should always be a tablet available for each and every student, and not one student without one. Also these tablets will obviously be used for learning. I think since my school has no computers, or laptops i think we need about 1 to 3 depending on what class. Going back to the tablets there should be internet and WiFi available for all students just some websites that are noneducational should be blocked by the school.	1/30/2014 9:55 AM
84	The internet (wifi) in our school is dreadful on all mobile devices and i feel as if all of the blocks and bans of websites are out of control and that you should block and ban targeted websites not keyword or criteria that a website follows, since when is a "blog" sight harmful when it is a link to a Merriam Webster dictionary site ( and by the way NOBODY USES BLOG SITES ANYMORE!!!)	1/30/2014 9:45 AM
85	Let students have iPads as main source of work and organization	1/30/2014 9:45 AM
86	none	1/30/2014 9:44 AM
87	none	1/30/2014 9:44 AM

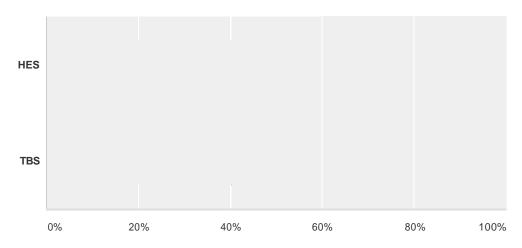
	rial value delilodis reclinology student survey	
88	Allow students more advanced technology to further improve research or activities for academic or other curriculums.	1/30/2014 9:44 AM
89	uses tablets in the class room	1/30/2014 9:43 AM
90	not block so many websites	1/30/2014 9:43 AM
91	Maybe have more in class technology. Like maybe a set of in class only laptops.	1/30/2014 9:42 AM
92	no	1/30/2014 9:42 AM
93	get more tablets to interact with.	1/30/2014 9:42 AM
94	make it more available	1/30/2014 9:42 AM
95	take down most of the website restrictions, because it gets hard to do work sometimes.	1/30/2014 9:42 AM
96	faster internet it takes very long some times to log on and save work at the end of class and open internet explorer	1/30/2014 9:41 AM
97	Unlock the wi-fi.	1/30/2014 9:41 AM
98	None	1/30/2014 9:40 AM
99	none	1/30/2014 9:38 AM
100	The computers in the library are kind of slow.	1/30/2014 9:37 AM
101	I don't have any.	1/30/2014 9:02 AM
102	none	1/30/2014 9:01 AM
103	in school ipads/ lap tops for classroom use	1/30/2014 9:00 AM
104	Get Ipads for everyone	1/30/2014 8:58 AM
105	faster computers	1/30/2014 8:58 AM
106	should have photoshop on the library computers for use, I love photoshop	1/30/2014 8:58 AM
107	NO! This class is amazingly fun, educational, and my teacher is amazing!	1/30/2014 8:57 AM
108	Faster computers, no impero, or limit the blocked thing in impero	1/30/2014 8:57 AM
109	no impero more robotics	1/30/2014 8:57 AM
110	More IT guys. It takes all day to get things fixed. Also update ALL computers to windows 7 at least. Learning center computers are too slow on XP.	1/30/2014 8:57 AM
111	Make faster internet and give students time to use computers to do research and schoolwork online more often.	1/30/2014 8:56 AM
112	i would suggest have like 1 or 2 computer labs that allow all sites and video games.	1/30/2014 8:56 AM
113	MAKE SURE NO GAMING SITES ARE ALLOWED	1/30/2014 8:55 AM
114	none	1/30/2014 8:54 AM
115	more ipads or tablets	1/30/2014 8:54 AM
116	Revisit all the sites you blocked because some of them are interfering with my school work as idkDONT BLOCK A MIT SITE Other than that, I suggest you invest in a photography course thats in school because most people do not have the time after school. Also, if you could provide more hands on smartboard learning that would be great-I havent touched a smartboard for school since october.	1/30/2014 8:53 AM
117	A lot of the computers do not have photoshop and other essential creative programs on them	1/30/2014 8:53 AM
118	Less blocked websites	1/30/2014 8:14 AM
119	Less block on certain websites with potentially useful information	1/30/2014 8:11 AM
120	We should block more learning websites. Block Google Drive again and Prezi AGAIN. Also block anything else that students might find useful in school please. Thank you very much and have a good day.	1/30/2014 8:09 AM

121	Block Google Drive again, along with anything useful and/or informative. We can't let that smut onto our school computers. This is for school! Not for learning! Thanks, ants. Thants.	1/30/2014 8:09 AM
122	Don't block 90% of the websites please.	1/30/2014 8:07 AM
123	None.	1/30/2014 8:05 AM

### Harvard Public Schools Technology Teachers Survey

### Q1 I teach at:

Answered: 70 Skipped: 3

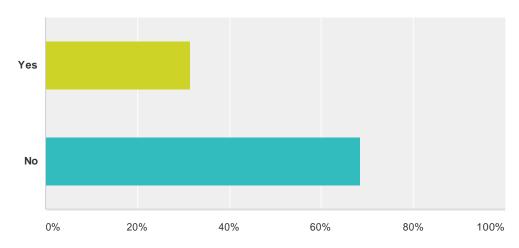


Answer Choices	Responses
HES	<b>45.71%</b> 32
TBS	<b>57.14%</b> 40
Total Respondents: 70	

### Harvard Public Schools Technology Teachers Survey

### Q2 Have you read the current tech plan?

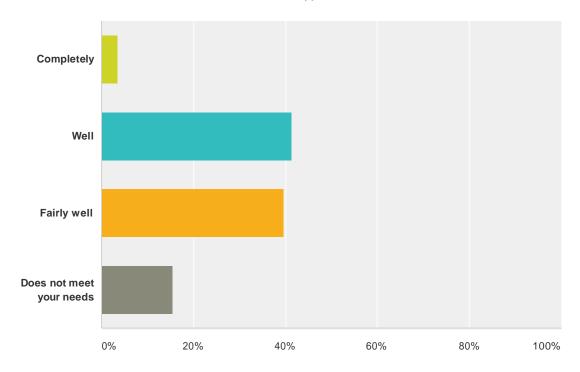
Answered: 73 Skipped: 0



Answer Choices	Responses
Yes	<b>31.51%</b> 23
No	<b>68.49%</b> 50
Total	73

## Q3 How well did technology instruction offered through professional development meet your individual needs?

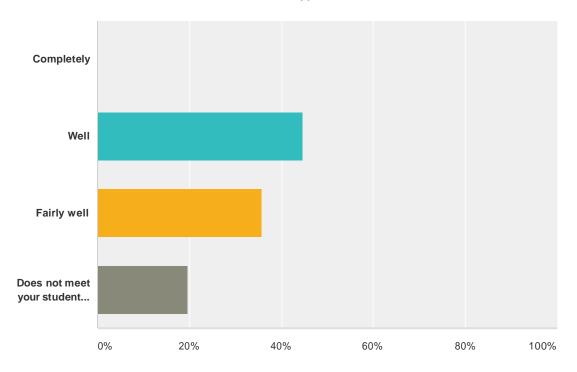
Answered: 58 Skipped: 15



Answer Choices	Responses	
Completely	3.45%	2
Well	41.38%	24
Fairly well	39.66%	23
Does not meet your needs	15.52%	9
Total		58

## Q4 How well did technology instruction offered through professional development help you meet your students' needs?

Answered: 56 Skipped: 17



Answer Choices	Responses	
Completely	0%	0
Well	44.64%	5
Fairly well	<b>35.71%</b> 20	0
Does not meet your students' needs	19.64%	1
Total Respondents: 56		

### Harvard Public Schools Technology Teachers Survey

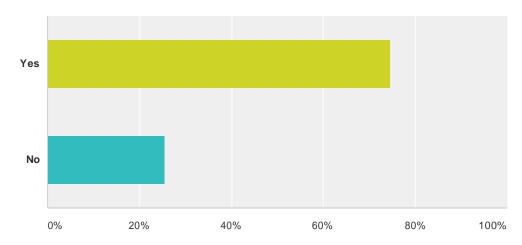
### Q5 What Professional Development has been particularly helpful for you?

Answered: 29 Skipped: 44

#	Responses	Date
1	Everything that has been provided is benficial in some way	2/7/2014 8:54 AM
2	Because I didn't have a projector in my room until this year, I didn't really take advantage of the PD. Having a projector has opened up all kinds of possibilities.	2/5/2014 1:46 PM
3	Smart board courses All of Beth Cregan's classes on various topics.	2/4/2014 3:38 PM
4	Various IPad workshops offered	2/3/2014 8:09 PM
5	Going to I pad trainings outside of the school to see how other schools are using them.	2/3/2014 2:26 PM
6	Google Site, label making for classes, ipad	2/3/2014 12:16 PM
7	Smartboard workshops	2/1/2014 9:00 PM
8	I'm not sure what PD on technology instruction you are referring to. We have some Gradequick, Edline and Teachpoint sessions (not sure I'd call them PD) which are fine. There seems to be a lot of IPad training at HES, but not here - we don't have IPads (and I'm not sure we really need them anyway.) So - it's hard to answer which tech PD has been particularly helpful	2/1/2014 1:51 PM
9	Smartboard iPad	1/31/2014 2:44 PM
10	iPad training	1/31/2014 9:00 AM
11	6 hour iPad training for Sped staff	1/30/2014 9:34 PM
12	Teacher to teacher support	1/30/2014 3:34 PM
13	new report card, teach point for teacher evaluation	1/30/2014 2:35 PM
14	Edline training with Wyatt Holt, summer 2012	1/30/2014 11:54 AM
15	Using teachpoint	1/30/2014 8:47 AM
16	The iPad training I received a few years ago from an Apple rep was marvelously helpful, actually!	1/30/2014 8:25 AM
17	Opportunity to learn the I-Pad.	1/30/2014 6:09 AM
18	iPad course in Shrewsbury, online course through Lesley and many courses and conversations, along with planning with Beth	1/29/2014 8:59 PM
19	Smart board and iPad instruction.	1/29/2014 7:00 PM
20	Ipad, smart board	1/29/2014 6:37 PM
21	Training in Excel and Movie Maker, as well as trainings in applications we are using such as TeachPoint	1/29/2014 4:30 PM
22	Learning Teachpoint	1/29/2014 3:43 PM
23	The professional development at school has been too basic.	1/29/2014 3:27 PM
24	Ipad related courses	1/29/2014 3:26 PM
25	N/A	1/29/2014 3:03 PM
26	Summer technology courses offered in house are very on topic with what I need and am ready for.	1/29/2014 2:58 PM
27	IPad	1/29/2014 2:55 PM
28	How to use Gradequick and Edline How to use Clickers How to use the SmartBoard	1/29/2014 2:55 PM
29	I have been to some teachpoint and edline workshops. They are fairly easy to use!	1/29/2014 2:52 PM

## Q6 Do you use the IT Help Desk form when you require technology support?

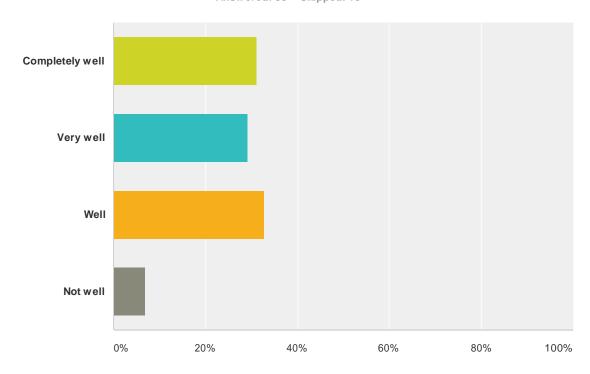
Answered: 59 Skipped: 14



Answer Choices	Responses
Yes	<b>74.58%</b> 44
No	<b>25.42%</b> 15
Total	59

## Q7 How well are your needs for technology support being met?

Answered: 58 Skipped: 15

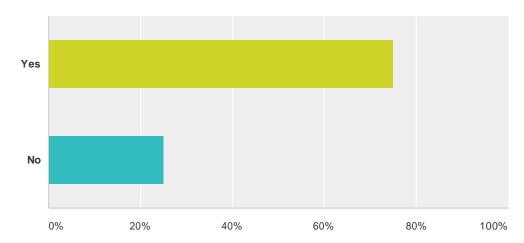


Answer Choices	Responses	
Completely well	31.03%	18
Very well	29.31%	17
Well	32.76%	19
Not well	6.90%	4
Total		58

#	If "Not Well", please explain	Date
1	need tech support at that moment or with in the 1/2hour or so.	1/31/2014 2:44 PM
2	"Support" is great but not always helpful because the technology devices do not meet the needs of our students.	1/30/2014 1:34 PM
3	The tech support I have received has been outstanding!	1/29/2014 7:00 PM
4	Library computers are often too slow, especially the front 14, to allow for a productive class period. Also, there are not enough computers for student use to meet the needs of the entire faculty. A mobile laptop cart with enough computers for an entire class would allow more teachers to utilize technology in their classrooms.	1/29/2014 3:43 PM
5	Very responsive through email!	1/29/2014 3:22 PM
6	This is a complicated question. I could use much more time in the Langauge Lab which is EXCELLENT but can only have one slot per class in a seven day cycle. There is no Smartboard in my room and my whiteboard is a mess. The Internet has been working GREAT this year, which is helpful.	1/29/2014 3:08 PM
7	There just doesn't seem to be enough people. It would be nice if we had an "Oksana" housed at HES, even part-time.	1/29/2014 2:58 PM

## Q8 Do the computers to which you currently have access perform the tasks you need them to perform?

Answered: 16 Skipped: 57

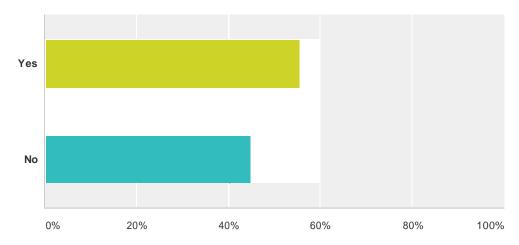


Answer Choices	Responses	
Yes	75%	12
No	25%	4
Total		16

#	If No, explain	Date
1	The desktop is very old and needs to be replaced. The laptop is brand new but freezes 2-3 times per week therefore halting instruction.	2/5/2014 2:06 PM
2	With only two computers and one iPad all students cannot have access to work on a project or even type a paper. Enrichment is limited to a few students and then a schedule needs to be kept to assure fairness.	2/4/2014 3:46 PM
3	Especially in the library- computers often don't load, lose the internet, or kick the kids off of websites I need them to access.	2/4/2014 1:22 PM
4	I find that the 14 or so computers at the front of the library are very slow, and sometimes don't work at all. I generally won't sign up for the library unless I can get the back, even though 2 of my classes fit in the front. It's too frustrating - too much of a waste of time.	2/1/2014 1:55 PM

### Q9 Have you been consulted about your access to new technology devices?

Answered: 56 Skipped: 17

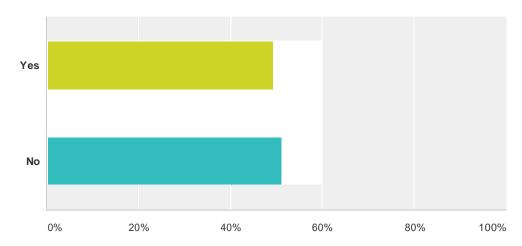


Answer Choices	Responses	
Yes	55.36%	31
No	44.64%	25
Total		56

#	If No, explain	Date
1	Not sure I understand the question. No one has come to me to introduce new technology devices.	2/4/2014 10:07 PM
2	I'm not even sure what this question means, so I guess it means I haven't been consulted! ;-)	2/1/2014 1:55 PM
3	could use more training before hand.	1/31/2014 2:46 PM
4	No one has discussed getting "state of the art technology" for our classroom. We have students that require the use of computers most if not all periods of the day and much of the time they can not access edline, etc. in a timely manner. Quite often they need to move from computer to computer. We are in need of updated computers and software.	1/30/2014 1:35 PM
5	In my role, I have not had access to new technology devices that I am aware of	1/30/2014 9:01 AM
6	I am not a general ed teacher, so my access to new technology devices tends not to be a consideration as it had never been factored into the technology budget. Devices such as SMARTBoards and iPads had to come out of a different budget. This was particularly made apparent when the Docu-cams were introduced. My team was present for the staff meeting training and updates about these cameras, but was then explicitly told that we would not be receiving them personally.	1/30/2014 8:30 AM
7	Not sure I understand the question.	1/29/2014 7:04 PM
8	Not sure what you mean by consulted. Never discussed it with anyone	1/29/2014 4:37 PM
9	what new devices?	1/29/2014 3:13 PM
10	I got in on the technology grant and modernized my classroom extensively. Because I have a first generation SmartBoard, that may be the next thing that needs to be modernized. I had a horrible 8yo computer that couldn't run videos and froze up after every update (of almost anything). That was replaced by a new machine by the end of October of that year (2011)	1/29/2014 2:59 PM
11	I don't know what this is referring to.	1/29/2014 2:58 PM

# Q10 Do you have access to an adequate number of technology devices in your classroom/department for your students' needs?

Answered: 57 Skipped: 16



Answer Choices	Responses
Yes	<b>49.12%</b> 28
No	<b>50.88%</b> 29
Total	57

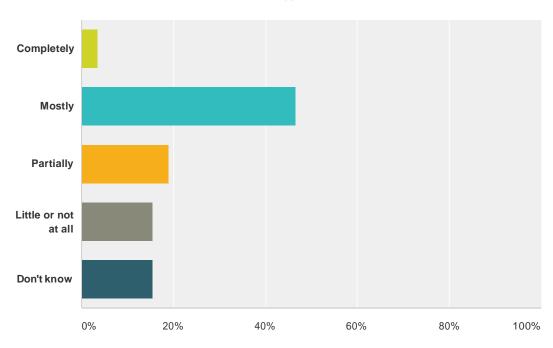
#	If no, what Technoolgy do you feel would be most useful and why?	Date
1	Would like access to class computers more often (library/laptop cart) etc.	2/7/2014 11:45 AM
2	Smart board, cameras, etc.	2/6/2014 8:58 AM
3	Another touchscreen computer for student use would be beneficial.	2/5/2014 2:06 PM
4	I do have some (interactive white board and clickers), but would like another location or access to computers to help kids process data/use the internet.	2/4/2014 10:07 PM
5	We have access to the computer labs for class projects. For classroom use I would like a few (not for each student) iPads to allow better access for enrichment and support work for students.	2/4/2014 3:46 PM
6	Would like more I pads	2/3/2014 2:27 PM
7	It would be helpful to have more ipads in the classroom.	2/3/2014 12:17 PM
8	I could answer yes but the short answer is that the library is often booked up (which is great, because we are utilizing it - which is wonderful) but it's so booked up, many people can't get it when they need it. An Ipad cart (or two) would be great - assuming that they work, and we could actually all get online at the same time. I wonder about getting a set or two of clickers to use - I know the Science department likes theirs. I've been to some of their workshops but haven't taken it any farther	2/1/2014 1:55 PM
9	need lap tops or ipads	1/31/2014 2:46 PM
10	I do have access to a Smartboard but need my computer and set up to not be at the back of the room as it is inefficient. It should be closer to the Smartboard.	1/31/2014 12:25 PM
11	at lease 3 more iPad so that the children could use them at a "center"	1/30/2014 9:35 PM

### Harvard Public Schools Technology Teachers Survey

13	Numbers are appropriate, however, their ability to do the needed work required of the students is not.	1/30/2014 1:35 PM
14	Smartboard in the room would be wonderful to capture and print class-created notes for students, particularly those with IEP's that require teacher notes. I also strongly feel that we need greater access to computers for students during class time. The library labs book quickly and, particularly with the common core emphasis on informal and task-oriented research skills, it would be very helpful to be able to get students onto computers to research where I can offer direct on-the-spot guidance more regularly.	1/30/2014 11:59 AM
15	Computers for the students	1/30/2014 9:50 AM
16	Although, as mentioned above, having a Docu-cam would be a great way of displaying teacher-lead, live instruction with manipulatives, particularly for my students with attention difficulties.	1/30/2014 8:30 AM
17	At least one other room devoted to computers for classes to use.	1/30/2014 6:10 AM
18	Not necessarily one thing in particular. Laptops, ipads or other devices could all work if there were at least 5 of the same type of device. Individual (one to one) devices seem wasteful at this point. Until and unless they will be used for at least a portion of the day in all subjects, I think it's too much of a cost to expect of parents (or taxpayers).	1/29/2014 9:06 PM
19	Could always use more iPads.	1/29/2014 7:04 PM
20	Not too sure-I do not know what options I might have.	1/29/2014 6:23 PM
21	Spend fair amount research time in library, would like cart of computers for access in classroom. Heard HES has this, though don't know this for certain	1/29/2014 4:37 PM
22	Printers in faculty workroom are frequently out of service. Frequently, the library lab is full. As a result, plans to use technology are replaced with other activities.	1/29/2014 3:45 PM
23	Ipads to make the technology portable.	1/29/2014 3:39 PM
24	It would be nice to have a classroom set of iPads.	1/29/2014 3:28 PM
25	iPad carts extra desktop computer for classroom	1/29/2014 3:23 PM
26	Laptop, LCD and small computer speaker = I make it work. Research papers assigned as homework to avoid using the library. Students allowed to use their cellphones to look up words.	1/29/2014 3:13 PM
27	I would really like access to a class set of iPads. We are learning so much about the benefits of students learning but we have no way to test them out and really see what we can do. I feel like we've had great training and exposure to how this tool could enhance learning and instruction, but no actual tools to do it with! The one iPad/classroom just isn't enough.	1/29/2014 3:00 PM
28	As classes grow, I will need to add to the base probe units. I'll also have to deal with obsolescence and breakage.	1/29/2014 2:59 PM
29	New computers would be helpful	1/29/2014 2:56 PM
30	We need more computersor another computer lab. The library is used heavily, and if that's full there is nowhere else to work. It would be nice to have a laptop cart for use with probes, peer editing of papers, etc.	1/29/2014 2:54 PM

## Q11 To what extent do you feel this goal is being met?

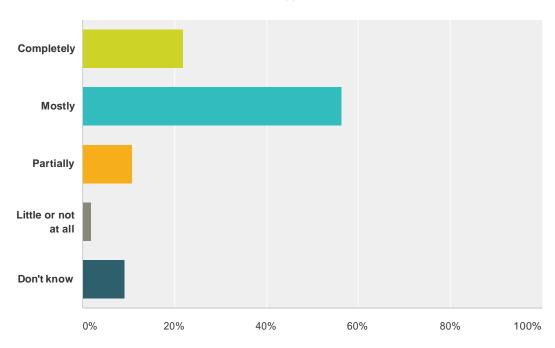
Answered: 58 Skipped: 15



Answer Choices	Responses	
Completely	3.45%	2
Mostly	46.55%	27
Partially	18.97%	11
Little or not at all	15.52%	9
Don't know	15.52%	9
Total		58

## Q12 To what extent do you feel this goal is being met?

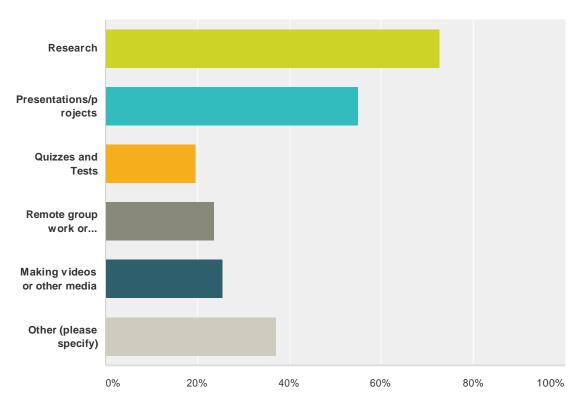
Answered: 55 Skipped: 18



Answer Choices	Responses	
Completely	21.82%	12
Mostly	56.36%	31
Partially	10.91%	6
Little or not at all	1.82%	1
Don't know	9.09%	5
Total		55

## Q13 In your classroom, students currently use technology for (select all that apply):

Answered: 51 Skipped: 22



Answer Choices	Responses	
Research	72.55%	37
Presentations/projects	54.90%	28
Quizzes and Tests	19.61%	10
Remote group work or collaboration	23.53%	12
Making videos or other media	25.49%	13
Other (please specify)	37.25%	19
Total Respondents: 51		

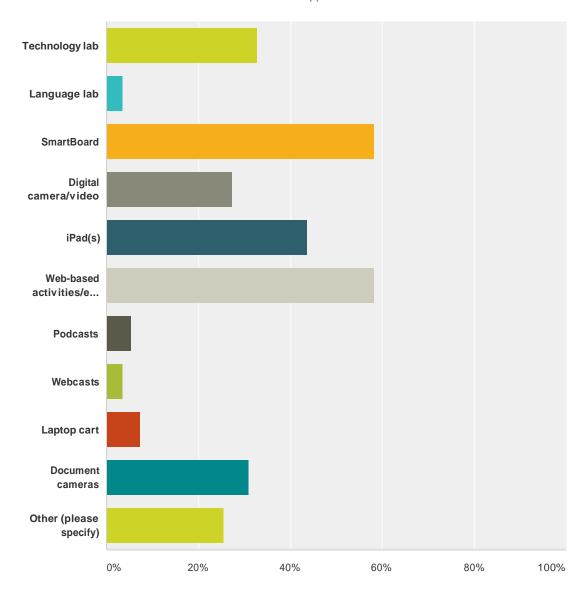
#	Other (please specify)	Date
1	Excel spreadsheets for graphing	2/7/2014 11:46 AM
2	None	2/6/2014 9:00 AM
3	Educational websites	2/5/2014 2:08 PM
4	Informal assessments	2/4/2014 10:24 PM
5	Smart boards are used for instruction with student interaction as well.	2/4/2014 3:54 PM
6	idependent review/practice of previously learned material (we only have 1 ipad)	2/3/2014 12:19 PM
7	General daily learning and internet based math program	2/1/2014 9:03 PM
8	reinforce skills	2/1/2014 6:04 PM

### Harvard Public Schools Technology Teachers Survey

	•	
9	smart board activities	1/30/2014 9:39 PM
10	note taking and in class writing	1/30/2014 3:36 PM
11	academic support, intervention	1/30/2014 9:01 AM
12	Skills practice	1/30/2014 8:31 AM
13	Pictures	1/29/2014 7:06 PM
14	Reward time, Read Live, Lexia	1/29/2014 6:41 PM
15	None in my room	1/29/2014 6:25 PM
16	Writing Accommodations	1/29/2014 4:32 PM
17	phonics and math support	1/29/2014 4:03 PM
18	Labs, Data Analysis, Mathematical modeling	1/29/2014 3:03 PM
19	data collection, formative assessments	1/29/2014 2:57 PM

## Q14 The following technology is used in your instruction (select all that apply):

Answered: 55 Skipped: 18



Answer Choices	Responses	
Technology lab	32.73%	18
Language lab	3.64%	2
SmartBoard	58.18%	32
Digital camera/video	27.27%	15
iPad(s)	43.64%	24
Web-based activities/exercises	58.18%	32
Podcasts	5.45%	3
Webcasts	3.64%	2
Laptop cart	7.27%	4

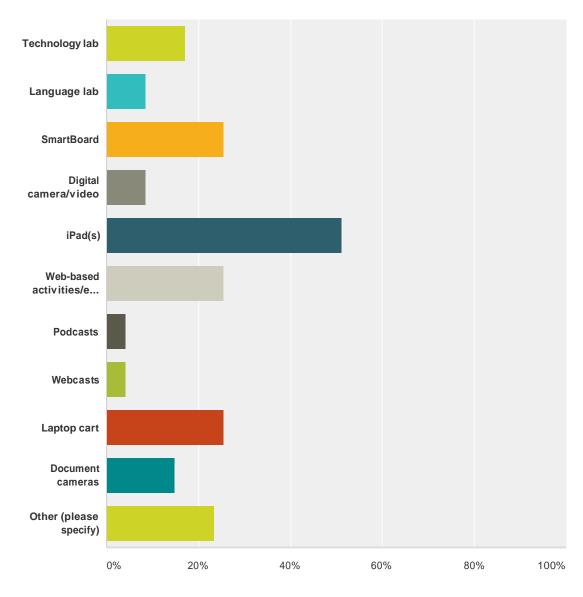
### Harvard Public Schools Technology Teachers Survey

Document cameras	30.91%	17
Other (please specify)	25.45%	14
Total Respondents: 55		

#	Other (please specify)	Date
1	None	2/6/2014 9:00 AM
2	Projector, Youtube videos, Google images	2/5/2014 1:50 PM
3	Activeboard - Promethean interactive white board	2/4/2014 10:24 PM
4	overhead computer projector	2/4/2014 1:32 PM
5	I don't know what the Technology lab is - if you mean the computers in the library, yes, I use those	2/1/2014 2:01 PM
6	You tube video instruction and informational videos	1/30/2014 3:36 PM
7	finale software	1/30/2014 9:52 AM
8	graphing calculators	1/30/2014 9:45 AM
9	Laptop and 2 desktops	1/29/2014 6:41 PM
10	Projector	1/29/2014 6:25 PM
11	N/A	1/29/2014 4:32 PM
12	The TI-83 +, which is a hand-held computer and is the technology mandated for use by the College Board as part of the AP Program.	1/29/2014 3:50 PM
13	scanners, projectors, printers	1/29/2014 3:44 PM
14	Probe/sensor technology, Clickers	1/29/2014 3:03 PM

# Q15 If you could gain access to additional technology in order to enhance your instruction, it would be (select all that apply):

Answered: 47 Skipped: 26



Answer Choices	Responses	
Technology lab	17.02%	8
Language lab	8.51%	4
SmartBoard	25.53%	12
Digital camera/video	8.51%	4
iPad(s)	51.06%	24
Web-based activities/exercises	25.53%	12
Podcasts	4.26%	2

# Harvard Public Schools Technology Teachers Survey

<del>_</del>		
Webcasts	4.26%	2
Laptop cart	25.53%	12
Document cameras	14.89%	7
Other (please specify)	23.40%	11
Total Respondents: 47		

#	Other (please specify)	Date
1	Touchscreen computer	2/5/2014 2:08 PM
2	tablet for computer control while walking about classroom	2/4/2014 1:32 PM
3	Would like to purchase heart rate monitors to use in p.e. to assess cardiovascular endurance during class. Also, would like to purchase the new national fitness tests that give a computer print out for each child indicating their fitness level and gives students/parents tips on how to improve their fitness scores.	2/3/2014 8:15 PM
4	Cameras that could record video would be extremely helpful.	2/3/2014 12:19 PM
5	I pad cart	2/1/2014 2:01 PM
6	Mac to create movies	1/31/2014 8:28 AM
7	garage band, mixers	1/30/2014 9:52 AM
8	2 or 3 more iPads	1/29/2014 6:41 PM
9	N/A	1/29/2014 4:32 PM
10	Content-oriented technology rather than general. I might be interested in particular modeling and simulation software like Mathematica and Physics Simulations	1/29/2014 3:03 PM
11	only if instruction came with them	1/29/2014 3:00 PM

# Q16 What Professional Development offerings would be most helpful to you?

Answered: 30 Skipped: 43

#	Responses	Date
1	I would like more information on using Google Share with students - right now I have a million documents in this sharedrive and would like to know how to better organize them and get the students on board with using them.	2/7/2014 11:46 AM
2	working with technology	2/7/2014 8:57 AM
3	Development in all areas of the above tools	2/6/2014 9:00 AM
4	How to use technology to formatively assess students and how to use technology so students can present information.	2/5/2014 1:50 PM
5	I'd like to learn more about Edline and some of the more advanced things that it can do (surveys, quizzes, etc.)	2/4/2014 10:24 PM
6	If I had additional devices in the classroom, I would seek PD for options to enhance individual student learning.	2/4/2014 3:54 PM
7	How to use certain math based softwares that would animate situations quickly	2/4/2014 1:32 PM
8	While the Ipad workshops that are offered seem great-I do not know many teachers here at Bromfield who have ipads to use in their classroom. I do not, but would be interested in getting one for classroom use. Also, I would be interested in PD to do things such as create podcasts, create a wiki or blog, and other online tools such as these.	2/4/2014 1:24 PM
9	Hands on activities with any devices to create classroom work.	2/3/2014 12:19 PM
10	Helping with learning curve for any new initiatives such as Teachpoint or Atlas Rubicon, etc.	2/1/2014 9:03 PM
11	At this point, although I use the SmartBoard, I don't think I'm using it to its fullest potential, so I guess more training on that could be good If we got laptop carts or Ipad carts, we'd need training on that. I like the idea of carts - but I don't like the idea of giving all the kids in the district Ipads. There isn't a question about this, so maybe it is not being considered - but It seems like that might be a direction we are headed in, and I don't think the faculty is really being consulted, and I think they should be. Going 'One to World', or whatever it is called is a big, expensive undertaking and I think it needs a lot of thought, time and planning IF we even want to consider it	2/1/2014 2:01 PM
12	Training with iPads, more Smartboard training,	1/31/2014 12:28 PM
13	training on how to use smart board, smart exchange, how to create interactive activities using smart board. right now i am using it mostly as a projector with the Elmo.	1/30/2014 9:39 PM
14	update on SmartBoard technology	1/30/2014 2:39 PM
15	Learing to use the Ipad more effectively.	1/30/2014 2:34 PM
16	software specific offerings (how to create, or teach students to create videos, wecasts, remote presentations, etc.).	1/30/2014 12:01 PM
17	I would love to go to a course on the Flipped Classroom model.	1/30/2014 8:31 AM
18	Learning about social media.	1/30/2014 6:11 AM
19	Apply hour with a twist - make it a teacher Show and Tell so we can see both other apps and ideas and strategies for how they are being used in other classrooms.	1/29/2014 9:11 PM
20	iPad classes Teacher website support	1/29/2014 7:06 PM
21	Not sure right now	1/29/2014 6:41 PM
22	Depends on offerings. Grading software help would be nice.	1/29/2014 6:25 PM
23	Integrating technology into the classroom with an emphasis on the content not the technology.	1/29/2014 3:30 PM

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1/29/2014 3:29 PM
1/29/2014 3:16 PM
1/29/2014 3:03 PM
1/29/2014 3:00 PM
1/29/2014 2:58 PM
1/29/2014 2:58 PM
1/29/2014 2:57 PM



ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	PU (MHZ	ram	os	HOST NAME	SERIAL NUMBER	COMMENT	INST-DATE
172	Peura	Computer	Desktop	Dell	XPSL502X	Corei5		6000	w7-64	b172-w7-OP	DD16SQ1		8/1/11
172	IT spare	Computer	Laptop	IBM	Lenovo Thinkpad t60	4		1024	хр		L3-3W8P7	DNR, gave to HCTV 3-25-14 to run powerpoint	8/1/07
172	IT spare	Computer	Laptop	IBM	Lenovo Thinkpad t60	4		1024	хр		I3-d6065-06/08	donated, DNR, replaced by murphy's desktop	9/1/07
172	IT spare	Computer	Laptop	Dell	Vostro 1500	C2D		1536	хр		BS8VRF1	at veterans(old library) 1-9-14	3/1/08
172	IT spare	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	hes-1520-3	G7JPLK1	Piche, died after ram replace	7/30/2009
172	IT-intern	Computer	Desktop	Dell	Optiplex 755	C2D		4096	W7-32	B195-W7-PM	BBGZRG1	replaced intern's ibm laptop, ref	10/2008
172	Boyle	Computer	Laptop	Apple	MacBook Pro	Corei7	2.8 gHz	16gb	10.9	B172-CB-Macbook	C02MF25VFH05		3/1/14
172	Boyle	Computer	Desktop	Dell	OptiPlex 9020	Corei7	3.4 gHz	8g	w7	B172-CB-W7a	9635CY1		10/8/13
172	IT spare	Computer	Laptop	Dell	Latitude E5510	C2D		4096	W7	B285-PN-w7	35RR5N1	downing borrowing until 4-28-14	8/19/10
205	Office/conf	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-11	5RH80D1		5/29/2007
209	Polis	Computer	Laptop	Dell	Latitude E5520	corei3		4096	w7-64		HJ6QKQ1		8/1/11
209	POLIS	Computer	Desktop	Dell	OptiPlex 3020					b209-w73020	1LCNH02		3/15/2014
503	O'Shea	Computer	Desktop	Dell	Optiplex 3010			4	w7-65		9TGV6Y1		7/13/13
503	O'Shea	Computer	Laptop	Dell	Latitude D531	AMD Turion X2		512	XP	Joshea-XP-Lat	3BGRFD1		8/1/07
504	Hoffman	Computer	Laptop	Dell	Vostro 3550	core i3		2200	4000		H08NMR1		3/1/12
café	Correnty	Computer	Laptop	Dell	Latitude E6510	Corei5		4000	w7	cafe-w7-pc	90050P1		11/1/10
Guid	Drew	Computer	Desktop	Dell	Optiplex 960	Core2		4000	w7		DW3SRL1		7/1/10
Guid	Intern	Computer	Desktop	Dell	Optiplex 745	DC		2048	VI	RM197-08	3RH80D1		8/1/07
Guid	Soldi	Computer	Laptop	Dell	Vostro 3550	corei5		4096	w7-32	LSoldiLaptop			9-01-2011
Guid	Farnsworth	Computer	Desktop	Dell	Optiplex 3010			4			9THW6Y1		7/13/13
Guid	Sara M	Computer	Desktop	Dell	Optiplex 755	C2D		4096	w7-32		166W GG1	ref October 2011	6/12/08
Maintenance	P. Landry	Computer	Desktop	Toshiba	PSLD8U-06C01E	DC		4	W7-64		19238069Q		7/1/09
Maintenance	Ken Pawson	Computer	Desktop	Toshiba		CD2		4Gig	W-647				7/1/05
Maintenance	Force	Computer	Laptop	Dell	Vostro 200			1000	хр		8ZL06H1		8/1/08
Maintenance	Mark Force	Computer	Laptop	Dell	Latitude	CD2		4Gig	XP				6/30/05
nurse	nurse	computer	laptop	dell	latitude 5530	i5		8g	w7	nurse-laptop	DRZWXY1	485ab6393ec8	12/20/13
Office	Holmes	Computer	Desktop	Dell	Optiplex 580	Core2Duo		2048	w7	BOFFICE-SH	D7BJNM1		8/1/10
Office	Waite	Computer	Desktop	Dell	Optiplex 580	Core2Duo		2048	w7	boffice-cw	D7BKNM1		8/1/10
Office	back rm	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	blib-xp745-6	9TH80D1	put in office march 2014	5/29/07

1

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M ram	os	HOST NAME	SERIAL COMMENT	INST-DATE
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-01	1LX7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-02	1LV9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-03	1M08CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-04	1M18CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-05	IM27CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-06	1LV8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-07	1M1BCX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-08	1LT7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-09	1LS8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-10	1LZ7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-11	1M17CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-12	1LY9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-13	1LY7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-14	1M09CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-15	1LW7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-16	1M07CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-17	1LT8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-18	1M19CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-19	1M0BCX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-20	1LV7CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-21	1LZ9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-22	1LW8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-23	1LX9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-24	1LX8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-25	1LS9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-26	1LZ6CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-27	1LW9CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-28	1LZ8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-29	1LY8CX1	4/5/13
101	Language	Computer	Desktop	Dell	Optiplex 3010	i3 3.3	4000	w7-64	llab-w7-30	1LT9CX1	4/5/13

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ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
101	LanguageT	Computer	Desktop	Dell	Optiplex 9010				w7-64	LLAB-W7-TEACHER	41H7CX1	teacher station	4/5/13
190	Zimmer	Computer	Laptop	Dell	Latitude E5531	core i5		8000	w8	b190-w7L-mz	6MC9MX1		7/15/13
191	Wass	Computer	Desktop	Dell	3010	core i5			W7	b191-dw7-rw	9THT6Y1		7/15/13
192	Shepherd	Computer	Laptop	Dell	Latitude E5530	core i5		8000	w7	b192-w7L-ps	HSC9MX1		7/15/13
193	Harmon	Computer	Laptop	Dell	Latitude E5530	core i5		8000	w7	b193-w7L-ph	4MC9MX1		7/15/13
194	Hyde	Computer	Desktop	HP	8000	C2D		4096	w7-32	B194-W7-JH	USH101004F	1 y.warranty	1/24/2011
195	Murphy	Computer	Laptop	Dell	Latitude E5531	core i5		8000	w8	b195-w7L-pm	1MC9MX1		7/15/13
196	Hermans	Computer	Laptop	Dell	Vostro 1015	C2D		3000	w7-64	b271-x7-rh	9KXGXL1	20856581893	4/22/10
196	Hermans	Computer	Desktop	Dell	Dimension E510	4		1024	XP	R198-ART-XP	9MBST91	2nd teacher station	4/19/2006
197	Brooks Desk	Computer	Desktop	Dell	Precision T1600	Xeon QC	3.5	8000	w7-64	DESK	FFG8NS1	teacher station	4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-01	FFCBNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-02	FFD7NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-03	FFD9NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-04	FFF8NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-05	FFB8NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-06	FF9FNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-7	FFFBNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-08	FFC9NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-09	FFDBNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-10	FFB9NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-11	FFC8NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-12	FFF7NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-13	FFBCVS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-14	FFD8NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-15	FFF9NS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-16	FFDDNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-17	FFCCNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-18	FFBFNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-19	FFDFNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-20	FFBDNS1		4/24/2012

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-21	FFDCNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-22	FFHBNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-23	FFFCNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-W7-24	FF9DNS1		4/24/2012
197	Brooks	Computer	Desktop	Dell	Precision T1600	Xeon QC		8000	w7	B197-DW7-25	FFBBNS1		4/24/2012
197	Brooks	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	B197-iMac	D25K90XWDNCV	(A1419)	March-2013
198	Hoorneman	Computer	Desktop	Apple	ac 27-inch, Mid 20	Core i5		8000	10.7-64	bArt-iMac01	D25J40W3DHJV		Aug-2012
198	Hoorneman	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	bArt198-iMac04	D25K91B1DNCV		March-2013
199	Harris	Computer	Desktop	Apple	ac 27-inch, Mid 20	Core i5		8000	10.7-64	bArt-iMac02	D25J40WCDHJV		Aug-2012
199	ART	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	bArt199-iMac03	D25K91DADNCV		March-2013
199	ART	Computer	Laptop	Dell	Vostro 1000	4		1024	XP	А	ARTRM199-XP	travel art laptop	2/8/2008
206	sped testing	Computer	Desktop	Dell	Optiplex GX520	4		512	хр	B322-XP-GX520	91GRJ81		9/21/05
206	sped testing	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP		1SH80D1		5/29/07
206	sped testing	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP		2TH80D1		5/29/07
224	Downing	Computer	Desktop	Dell	Latitude E5500	C2D		2048	хр	bsped-lat-xp-3	DPBLJK1	only	7/9/09
232	Tuttle	Computer	Laptop	Dell	Latitude E5520	corei3		4000	w7-64	B232-W7-ST	HJ6QWL1		8/4/11
234	Miller	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b234-w7-MM	9TMT6Y1		7/15/13
236	Carlucci	Computer	Desktop	Dell	Optiplex 360	celeron		2048	хр	b236-xp360-kc	B9V5DK1	only	9/3/09
238	LCENTER	Computer	Desktop	Dell	Vostro 200	C2D		2048	XP	B238-xp-v200	JNS82F1		11/9/2007
238	LCENTER	Computer	Desktop	Dell	Vostro 200	C2D		2048	XP	B238-xp-v200-2	DPS82F1		11/9/2007
238	Allard	Computer	Laptop	Dell	Latitude E5530	i5		4000	w7	b238-w7-ma	DSJTXW1	harvard trust 2013march	3/12/13
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-xpd-6	7RH80D1		5/29/07
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-dxp-3	3SH80D1		5/29/2007
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-dxp-2	BRH80D1		5/29/07
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-dxp-4	GPH80D1		5/29/07
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-dxp-5	FQH80D1		5/29/2007
238	Allard	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-xpdesk	3QH80D1		5/29/07
238	LCENTER	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-xpd-7	7TH80D1		5/29/07
238	LCenter	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b238-dxp-1	4TH80D1		5/29/07
246	Decoste	Computer	Laptop	Dell	Latitude E5500	C2D		2048	хр	bsped-lat-xp-2	JPBLJK1	only	7/9/09

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
246	Decoste	Computer	Desktop	IBM	Lenovo	DC		1024	XP	B206-XP2	LKDZYCT	student	2004
246	Decoste	Computer	Desktop	IBM	Lenovo	DC		1024	XP	B206-XP1	LKDZYCA	student	2004
246	Decoste	Computer	Desktop	IBM	Lenovo 926501U	3		1024	XP	B246-XP-LENOVO	LKDZWHT	student	2004
248	Tarullo	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b-248-dw7-gt	9TDV6Y1		7/15/13
248	Tarullo	Computer	Laptop	Gateway	M460E	4		512	хр	GTarulloLaptop	0036416489		2006
261	Brown	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b261-dw7-jb	9TKT6Y1		7/15/13
263	student	Computer	Laptop	HP	6715b	AMD		900	хр	B263XP-laptop	CNU7464BQZ		April 2008
263	Creaven	Computer	Laptop	Dell	Latitude e5520	Core i3		4000	w7		4DJSBT1		5/26/12
263	student	Computer	Desktop	HP	DC7800	C2D		4Gig	хр	JMARCH_R209	MXL848058		2007
263	student	Creaven	Desktop	HP	DC7800	C2D		4Gig	хр		MLX83704MP		2007
263	student	Computer	Desktop	IBM	Lenovo	DC		1024	XP	B263-XP-LENOVO1	LKDZWLL		2004
263	student	Computer	Desktop	IBM	Lenovo	DC		1024	XP	B263-XP-LENOVO2	LKDZYMC		2004
263	student	Computer	Laptop	Dell	Latitude e5510	Ci3		4000	w7		H9JW4N1	updated ram/w764 (wiener)	July 2010
264	Weiner	Computer	Desktop	Dell	optiplex 745				хр	b264-dxp-dw	BSH80D1	only	5/29/2007
265	VanDerveen	Computer	Desktop	HP	dc5750 Microtower	AMD DC		3072	W7	B265-XP-KV	2UA8381JBJ	only	Sep 2008
269	Travers	Computer	Desktop	Dell	Optiplex 740	MD Athlon X2 D	C	2048	хр	B269-xp-jt	9HW VPL1	only, need update to w7	3/17/10
271	Hadorn	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b271-dw7-mh	9TMV6Y1		7/15/13
271	all teachers	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-06	BTH80D1		5/29/07
271	Hill	Computer	Desktop	Gateway	E4000	4		512	XP	b271-xp-thill	00314555230	DNR computer	2003
272	Beckett	Computer	Desktop	Dell	Optiplex 3010	i5			w7		9TFT6Y1		7/15/13
273	Horton	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b273-dw7-jh	9TFW6Y1		7/15/13
274	Alexander	Computer	Desktop	Dell	Optiplex 3010	i5			w7	b274-dw7-pa	9TGW6Y1		7/15/13
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLFDNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLFCNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLH7NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWL8NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWMBNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWLBNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLGBNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWL9NS1		4/25/2012

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLG8NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLGDNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLF9NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLGCNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLG7NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLGFNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWM7NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWLCNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWMFNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLFBNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWLFNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWM8NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLFFNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWMCNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWMDNS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HLG9NS1		4/25/2012
275	Lavigne	Computer	Desktop	Dell	Optiplex 790	Core i5		8000	w7-64		HWM9NS1		4/25/2012
279	Jack	Computer	Desktop	HP	Compaq 8000 SFF	C2D	3.16	4000	w7		USH11500YP		06/21/2011
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-1	D2THKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-2	82THKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-3	9RSHKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-4	8QSHKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-5	9TSHKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-6	2VSHKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-7	D6THKV1		9/22/12
279	Science	Computer	Laptop	Dell	Lattitude e5530	Core i3	2.2	4000	w7	bsci-w7-8	J1THKV1		9/22/12
281	Campbell	Computer	Laptop	Dell	Vostro 1520	C2D		4000	w7	b281-1520w7-1	FHLF2L1	w7 up jan2014 from conte/jessica	12/14/09
281	Campbell	Computer	Laptop	Dell	Vostro 1520	C2D		2048	хр	bsped-xp-vo1	7MLF2L1	only TS	12/14/09
281	Campbell	Computer	Desktop	HP	DC7800	4		512	XP	RM281-XP1-MBC	MXL83704MP	sped	2008
281	Campbell	Computer	Desktop	IBM	LENOVO 926501U	C2D		1024	XP	B281-XP3-MBC	LKDZYPF	sped	2004

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
281	Campbell	Computer	Desktop	IBM	LENOVO 926501U	C2D		1024	XP	B281-XP4-MBC	LKDZWNW	sped	2004
281	Campbell	Computer	Desktop	IBM	LENOVO 926501U	C2D		1024	XP	B281-XP2-MBC	LKDZWPV	sped	2004
285	Bio-chem	Computer	Laptop	Dell	Vostro 1000	AMD T X2		1024	XP	b285-v1000xp	D6N7RD1	DNR for old test gen programs	9/27/2007
285	Nilan	Computer	Laptop	Dell	Latitude E5530	core i5		4096	W7	b285-w7-pn	70L2VY1		12-1-13
287	Pierce	Computer	Laptop	Dell	Latitude E5530	core i5		8000	w8	b287-w7L-dp	FTC9MX1		7/15/13
289	Doherty	Computer	Desktop	Dell	Optiplex 360	celeron		2048	XP		B9V2DK1		9/3/2009
290	Townsend	Computer	Laptop	Dell	Inspiron 1545	C2D		4096	W7	b290-w7-mm	4D9G9N1		oct 2010
291	Fraser	Computer	Desktop	Dell	Optiplex 360	celeron		2048	XP	b291-xp-jf	B9W4DK1		9/3/2009
292	Rosal	Computer	Desktop	Dell	Optiplex 745	C2D		2000	хр	B292-xp-mc	5TNYXC1	ref 2010	5/8/2007
294	Keane	Computer	Laptop	Dell	Latitude E5531	core i5		8000	w8	b294-w7L-kk	3SC9MX1		7/15/13
295	Besold	Computer	Desktop	Dell	Optiplex 755	C2D		4000	w7-64	b295-w7-sb	FDXSGF1	nov 2011	5/3/2011
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook01	C1MHL0VBDTY3		Sept-2012
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook02	C1MHL1F4DTY3	broken in IT	Sept-2012
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook04	C17J33MYDTY3		Sept-2012
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook05	C1MHL1GNDTY3		Sept-2012
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook07	C1MHMQ4HDTY3		Sept-2012
320	Price	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook08	C1MHK4EWDTY3		Sept-2012
321	Conte	Computer	Laptop	Dell	Latitude e5520	Core i3		4000	w7		4DJBCT1	sped	5/26/12
321	Conte	Computer	Desktop	HP	dc7800 SFF	C2D	2.2	1024	хр	MXL830160R			2008
321	Conte	Computer	Desktop	IBM	Lenovo	C2D		1024	хр	B321-XP-LENOVO1	LKFGXPN	sped	2004
321	Conte	Computer	Desktop	Dell	Optiplex 755	c2	4600	4000	w7	hes143-w7-ld	C2P6DG1	from montalto (hes, 2011 ref)	6/2/08
321	Conte	Computer	Desktop	Dell	Optiplex 755	C2D		4000	w7	b295-w7-sb	DZLZLF1	ref nov2011	?2008
330	Lombard	Computer	Laptop	Dell	Latitude E5510	C2D		4096	w7		25RR5N1		8/19/10
330	Lombard	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b330-ddxp-jl	CSH80D1	4y.o.laptop also	5/29/07
332	Dyer	Computer	Desktop	Dell	Optiplex 360	celeron		2048	хр	B332-DELLXP-JD	B9W3DK1	only	9/3/09
334	Holt	Computer	Laptop	Dell	Latitude D530	C2D		1024	хр	b334-xp-d530	7PV8WG1	old pierce laptop-student station	July 2008
334	Holt	Computer	Laptop	Dell	Latitude E5531	core i5		8000	w8	b334-w7L-wh	HLC9NX1		7/15/13
338	Verrochi	Computer	Laptop	Dell	Latitude E5521	corei3		4097	w7-64	b338-w7-ev	HJ6PWL1		aug 2011
340	Suchecki	Computer	Laptop	Dell	Latitude E5510	C2D		4096	W7	b340-es-w7	55RR5N1		sept 2010
340	Sucheki	Computer	Desktop	HP	dc7800	C2D		2048	XP	B340XP	MXL748082K		2008
342	DESARRO	Computer	Laptop	Dell	Latitude E5520	corei3		4096	w7-64	b342-w7-md	HJ6NKQ1		aug 2011

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
344	Tabor	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-18	7SH80D1		5/29/07
344	Tabor	Computer	Laptop	Dell	Latitude E5510	C2D		4096	w7				sept 2010
346	McManus	Computer	Laptop	Dell	Latitude E5510	C2D		4096	W764		45RR5N1	updated to 4gb, w7-64	sept 2010
348	Keating	Computer	Desktop	IBM	kcentre MT-M6072-C	C2D		4096	w7-64		LKAR_PL		4/1/12
334	Holt	Computer	Laptop	Dell	Latitude D531	AMD T X2		1024	XP	281-Campbell-XP	BP1WHD1	DNR holt	8/24/2007
349	Wager	Computer	Laptop	Dell	Latitude D531	AMD T X2		1024	хр	gwager-xp-SPED	DP1WHD1	used once a week	8/24/2007
349	Bagatelle	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	B349-DDXP-01	JQH80D1		5/29/07
349	Bagatelle	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	B349-DDXP-02	5SH80D1		5/29/2007
349	Bagatelle	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	B349-DDXP-03	FRH80D1		5/29/07
349	student	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook03	C1MHMP0JDTY3	student	Sept-2012
349	student	Computer	Laptop	Apple	BP 13.3, Mid 2012	Core i5	2.5	4000	10.7-64	bSpedMacbook06	C1MHMQ46DTY3	student	Sept-2012
349	Bagatelle	Computer	Laptop	HP	6715b	AMD		1024	XP	B524XP-LAPTOP	CNU7464BQK	student	April 2008
349	Bagatelle	Computer	Laptop	Dell	Latitude E5500	C2D		2048	хр	bsped-lat-xp-1	3QBLJK1		7/9/2009
349	Bruning	Computer	Laptop	Dell	Latitude E5500	C2D		2048	хр	bsped-lat-xp-4	GPBLJK1		7/9/2009
349	Bagatelle	Computer	Laptop	acbook pr	a1278			4000	10.8	admins-MacBook-Pro	C17J5EMXDTY3	sped Davida's macbook, adobe acrobat pro/photoshop	2012
349	Bruning	Computer	Desktop	Dell	ull size Optiplex 745	C2D		2048	хр	B349-DDXP-GB	CFHDCC1	in left office 341 conf room	1/10/07
349	Bagatelle	Computer	Desktop	HP	dc7800	C2D		2048	XP		J0H80D1	?	2007
349	Bagatelle	Computer	Desktop	IBM	Lenovo	DC		1024	XP	B206-XP4	LKDZYHM	in middle office	2004
355	Kendall	Computer	Laptop	Dell	Latitude E6500	C2D		4096	хр	b355-xp-tz	3MQ3QM1	7904447353 depot warranty - screen repaired	6/25/10
370	Ufema	Computer	Desktop	Dell	Optiplex 3010			4096	w7		9YLT6Y1		7/12/2013
370	Reynolds	Computer	Desktop	Dell	Optiplex 3010			4096	w7		9TJW6Y1		7/12/2013
370	music	Computer	Desktop	Dell	Optiplex 755	C2D		4096	w7		HYKLWG1	used w/projector	6/29/2011
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW6LVV1	, ,	10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW6MVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW6PVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW7LVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	TBA	DW7MVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW7PVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW8JVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW8LVV1		10/24/2012

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW8MVV1		10/24/2012
370	music	Computer	Desktop	Dell	Vostro 260	Core i3	3.3	4000	w7	ТВА	DW9JVV1		10/24/2012
380	Silver	Computer	Laptop	Dell	Vostro 1000	AMD T X2		1024	хр	380-Ssilver-XP	F66NZD1	only	10/27/2007
380	Silver	Computer	Laptop	Dell	Latitude E5530	Core i5	2.5	8000	w7	bgym-w7-ss	H9BG7W1	yearbook	11/5/2012
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XP13	B1G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XP9	B2G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV1	23G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV10	51G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV11	53G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV12	H2G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV14	93G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV2	72G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV3	12G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV5	D3G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV6	42G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV7	D1G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV8	D2G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Vostro 200	DC		1024	XP	BROMLIB-XPV4	H1G2HD1		8/16/07
390	Library	Computer	Desktop	Dell	Optiplex 745	DC		4096	w7	opti745-w7	BQH80D1		5/29/07
390	Library	Computer	Desktop	НР	8000	C2D		4096	w7-32		USH04700D5	reinstall notes: Q43/Q45 Express chipset, Intel Active Management technology (AMT)	February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH05200GK		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04700XB		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH0450083		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04700XD		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH05200G4		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04700YA		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH045008C		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH05200EV		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04400R4		February 2011

ROOM	NAME	Туре	Sub-Type	BRAND	Model	CPU	U (M	ram	os	HOST NAME	SERIAL	COMMENT	INST-DATE
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH045008B		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04700YB		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH101004E		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH0450081		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH05200GC		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH048008N		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH101004J		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04700YV		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH0470042		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH05100FZ		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH051001X		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH101004P		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH101004D		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH045001N		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH04800A2		February 2011
390	Library	Computer	Desktop	HP	8000	C2D		4096	w7-32		USH101003N		February 2011
390	Library	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	bLIB-iMac01	D25K90F4DNCV		February 2014
390	Library	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	bLib-iMac02	D25K704NDNCV		February 2014
390	Library	Computer	Desktop	Apple	ac 27-inch, Late 20	Core i5 QC	2.9	8000	10.8-64	bLib-iMac03	D25KC010DNCV		February 2014
393	Foster	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-12	FSH80D1	only TS	5/29/07
393	Thurston	Computer	Laptop	Dell	Latitude E5531	core i5		8000	w8	b393-w7L-jt	GRC9MX1		7/15/13
?	Thurston	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-09	HSH80D1		5/29/07
?	Wagner	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	RM197-16	BSH80D1		5/29/07

#### Bromfield tablet Inventory as of 5/6/14

ROOM	NAME	Model	GB	SERIAL	COMMENTS	INST-DATE
263	Creaven	apple ipad2	16	DN6H47RKDKPH		2-712
	GLORIA WAGER	ipad		DN6H4DA6DKPH		feb-15-12
	LIANNE MCCANN	ipad		DN6H4DSMDKPH		feb-15-12
	Colleen Nigzus	ipad	32	DMPG7FT8DFHY		12-Jan
	Davida Bagatelle	ipad		DN6G6B5VDKPH		
	Catherine Polis	ipad		DLXGK31WDJHF		
	Jim O'shea	ipad3	32	DYTJ65QDDJ8R		Aug-24-12
	Scott	ipad3	32	DYTJ67Y5DJ8R		Aug-24-12
	LA	ipad		DYTJXL1ADFHW		
	LA	ipad		DYTJXMS4DFHW		
	LA	ipad		DYTJXLTCDFHW		
	LA	ipad		DYTJXKN1DFHW		
	LA	ipad		DYTJXMDQDFHW		
LIB	Lib_Kindle_01	EY21		B024160431330HF6		May-1-13
LIB	Lib_Kindle_02	EY21		B024160431330HET		June-5-13
LIB	Lib_Kindle_03	EY21		B02416043134027D		June-5-13
LIB	Lib_Kindle_04	EY21		B0241604313402AT		June-5-13
LIB	Lib_Kindle_05	EY21		B024160431330HF0		June-5-13
LIB	Lib_Kindle_06	EY21		B02416043134028K		June-5-13
LIB	Lib_Kindle_07	EY21		B02416043134022J		June-5-13
LIB	Lib_Kindle_08	EY21		B024160431340281		June-5-13
LIB	Lib_Kindle_09	EY21		B02416043134020E		June-5-13
LIB	Lib_Kindle_10	EY21		B024160431330HEQ		June-5-13
	Lisa Sold	ipad3		DMQKQ6ZJF182		
	Deb Pierce	ipad3		DMPKTRD4F182		
	Jen Fraser	ipad3		DMPKTT7BF182		
	Russ Wass	ipad3		DMPKTRP9F182		
	Tom Reynolds	ipad3		DMPKTPBHF182		
	Kamlean Dohersy	ipad3		DMPKTSEKF182		
	Amy Price	ipad3		DYTJXMS4DFHW		

ROOM	NAME	Туре	Sub-Type	Brand	Model	CPU	U (MH	RAM	os	HOST NAME	SERIAL	COMMENT	INST-DATE
116	Reale	Computer	Laptop	Dell	vostro 3550	core i3	2200	4000	w764	hes116-w7-cr	118NMR1		3/8/12
119	Ekland (nurse)	Computer	Desktop	Dell	755	c2d		4000	w7	HES-NURSE-XP	594B0G1		Oct-11
246	Donnellan	Computer	Laptop	Dell	Latitude E5500	C2D	2048	XP		hes246lat-xp-kd	BPBLJK1		July 2009
Boiler	Bearce	Computer	Laptop	Dell	Latitude e5530	core i5	8000	w7		HBOILER-W7MB	8DBNSY1		10/10/13
Office	Henry	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7		GV0MWW1		February 2013
HES-Café	Kerwin	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	HCAFE-W7_DK	3MZLWW1		February 2013
Office	Grogan	Computer	Desktop	HP	Compaq dc7800sq	?		2000	хр		MXL8500R5B	#GC455AV	9/1/10
OFFICE	Loreli	Computer	Desktop	Dell	Vostro 260	4		4000	w7	hoffice-w7-lg	2Y7RV1		2013
Office 112	Dwight	Computer	Laptop	Dell	Latitude 5520	corei3		4000	w7-64	HES224-W7-TW	B37G5S1		1/1/12
116	Chlapowski	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h116-1520w7-sc	F5JPLK1	Chlapowski jan2014	7/30/2009
Office	Grogan	Computer	Desktop	Dell	OptiPlex 3020					HOFFICE-W7-MG	1LBJH02		3/15/14
APC SMART UPS 1500 E	BATTERY BACKUP IN	IT CLOSET											
server rm	ΙΤ	Computer	Server	Dell	PowerEdge SC1430	Xeon		4000		TERMHES?	6BY0BC1	1-3 GREEN FLASHING - POWER (moved to bromfield nov2013)	12/28/06
server rm	IT	Computer	Server	Dell	success maker	Xeon		2000					

#### Hildreth tablet Inventory as of 5/6/14

ROOM	NAME	BRAND	GB	SERIAL	COMMENTS	INST-DATE
221	GRETCHEN MCNERNEY			DN6H4BLHDKPH		2/15/12
143	LINDA DEMKOSKI			DN6H4BKTDKPH		2/15/12
SPED	KATHLEEN DONELLAN	apple	16	DR5HQ3UZDKPH	Lions Club (Community Service Grant)	9/1/12
	Cregan			DMPHLYAXDJ8T	HES1201	
	Gilfix			DMPHLY80DJ8T	HES1202	
	Harris			DMPHLCSADJ8T	HES1203	
	Keith			DMPHLQADDJ8T	HES1204	
	Kelley			DMPHLYKMDJ8T	HES1205	
	Reale			DMPHLARGDJ8T	HES1206	
	Carroll			DMPHLBW9DJ8T	HES1207	
	Chapman			DMPHLSD5DJ8T	HES1208	
	Hopkins			DMPHLSBNDJ8T	HES1209	
	Lazaro			DMPHLQXADJ8T	HES1210	
	Ayles			DMPHL8Q9DJ8T	HES1211	
	Normandin			DMRHK971DJ8T	HES1212	
	Snell			DMPHLQR8DJ8T	HES1213	
	Sullivan			DMPHLYHKDJ8T	HES1214	
	Bassage			DMPHKVRRDJ8T	HES1215	
	Crittendon			DMPHLL8JDJ8T	HES1216	
	Moore			DMPHLQWQDJ8T	HES1217	
				DMPHLY9WDJ8T	HES1218	
	Cheveralls			DMPHLS79DJ8T	HES1219	
	Hurley			DMQHJ0M2DJ8T	HES1220	
	Kittredge			DMPHLSMZDJ8T	HES1221	
	Piche			DMPHLY7XDJ8T	HES1222	
	Accorsi			DMPHLYE1DJ8T	HES1223	
	Ambrosino			DMPHLS3MDJ8T	HES1224	
	Cullinane			DMRHKA46DJ8T	HES1225	
	Marya			DMPHLQCZDJ8T	HES1226	
	Gould			DMQHKG3VDJ8T	HES1227	
	Hansen			DMPHLMBZDJ8T	HES1228	
	Newbould			DMPHLL1FDJ8T	HES1229	

#### Hildreth tablet Inventory as of 5/6/14

	Niland	DMPHLXJJDJ8T HES1230	
title1	title1	DMRJPJNEDFHW	12/12/12
title1	title1	DMRJP78BDFHW	
title1	title1	DMRJP7A3DFHW	
title1	title1	DMRJPNWDDFHW	
	LA	DYVJRN7JDFHW	
	LA	DYTJWMWHDFHW	
	LA	DYVJR2WHDFHW	
	LA	DYTJWMYYDFHW	
	LA	DYVJRN1JDFHW	
	LA	DYVJR2X2DFHW	
	LA	DYVJR34ZDFHW	
	LA	DYVJR2WSDFHW	
	LA	DYVJR2Z4DFHW	
	LA	DYVJRN3HDFHW	

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	set T	COMMENT	INST-DATE
106	Gilifix	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h106-w7-dg	CLXLWW1			February 2013
107	Carroll	Computer	Desktop	Gateway	E-4600S	P4HST	3400	512	XP	HES107-XP	0037081311		DNR	2005
107	Carroll	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	H107-W7-DC	16THKV1			Sept 2012
111	Hopkins	Computer	Desktop	Gateway	E-4600S	P4HST	3400	512	XP	HES111-XP	0037081310		DNR	2005
111	Hopkins	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	h111-w7-lh	HMPHKV1			Sept 2012
113	Lazarro	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	hes113-smart-KL	67JPLK1		still in 113	7/30/2009
113	Lazarro	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	H113-W-KL	G2THKV1			Sept 2012
113	Lazarro	Computer	Desktop	Dell	Vostro 200	c2d	2800	1024	XP	HES-231-XP	66BPRF1		RM231	2/28/08
114	Chapman	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	hes114-w7-pc	B37H5S1		E4:D5:3D:B1:F7:7C	1/21/2012
114	Chapman	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	v1520-lw-03	29MPLK1		Niland, w7, 4g. Jan 2013	7/30/2009
118	Steeves	Computer	Laptop	Dell	Latitude E5530	i3	2200	4000	w7	HMATHT1-1	5ZM48W1			dec 2012
123	Normandin	Computer	Desktop	Gateway	E4100	4	2593	256	XP	hes124-xp-3	0032726513		DNR	2003
123	Normandin	Computer	Desktop	Gateway	E4100	4	2593	256	XP	RM126-HES-1	0032726512		DNR, SMC swith(5)	2003
123	Normandin	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	h126-w7-cn	6B1JKV1			Sept 2012
124	Ayles	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	H123-W7-DA	3QPHKV1			Sept 2012
124	Ayles	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h124-1520w7-da	B6JPLK1		ram/w7 update jan2014	7/30/2009
126	Burns	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h124-w7-ch	GLXLWW1			February 2013
126	Burns	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h126-w71520	G5JPLK1		updated to 4gb, w7	7/30/2009
129	Correnty	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h129-w7-CH	3PZLWW1			February 2013
130	Snell	Computer	Desktop	Dell	OptiPlex 3020						1LBLH02			3/15/14
130	Snell	Computer	Laptop	Dell	Latitude E5530	Core i3	2200	4000	w7	h130-w7-cs	4SXHKV1		10456429789	Sept 2012
133	Foreman	Computer	Desktop	Dell	Inspiron One 2305 touch	sD Athlon 64	4X2	4000	w7-64	HES133-w7-1	C3D63P1		new2011september (one mov	Sep-11
133	Foreman	Computer	Desktop	Dell	Inspiron One 2305 touch	sD Athlon 64	4X2	4000	w7-64	HES133-w7-2	BM693P1		new2011september	Sep-11
133	Foreman	Computer	Laptop	Dell	latitude e5520	Core i3		4000	w7	hes133-w7-mf	4DJTBT1		used w/smartboard	May 2012
133	Foreman	Computer	Laptop	Dell	latitude e5510	i3		4	W7-64	H133-W75510-mf	G9JW4N1		updated RAM/64bitw7 jan2014	7/26/2010
134	Kranz	Computer	laptop	Dell	Latitude E5510		4000		w7		1BJW4N1		updated RAM/64bitw7 jan2014	
136	Demetros	Computer	Desktop	Dell	Inspiron One 2305 touchsD Athlon 64X2			4000	w7-64	h136-w7-read1	FDM3NQ1		School TRUST	10/20/2011
136	Demetros	Computer	Desktop	Dell	Inspiron One 2305 touchsD Athlon 64X2				w7-64	h136-w7-read2	FHY1NQ1		School TRUST	10/20/2011

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	set T	COMMENT	INST-DATE
143	Montalto	Computer	Laptop	Dell	Latitude e5530	core i5		8000	w7	H143-W7L-HM	6LBNSY1			10/10/13
144	Newbould	Computer	Desktop	HP	Touchsmart 520PC 520-1	Core i3		4000	w7	h144-hpw7-en	3CR2240LRW		QP790AA#ABA	Sept 2012
144	Newbound	Computer	laptop	dell	Latitude E5530	Core i3		4000	w7	h144-w7-en	FBPKLV1		new nov 2012	nov 2012
145	Richard	Computer	Desktop	HP	Touchsmart 520PC 520-1	Core i3		4000	w7	h145-hpw7-cr	3CR2240LRP		QP790AA#ABA	Sept 2012
145	Richard	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h145-w7-cr	JLYLWW1			February 2013
146	Niland	Computer	Desktop	HP	dc7600	4	3189	512	XP	HES146XP	2UA5380NC8		switch SMC 100 (5)	2006
146	Niland	Computer	Desktop	Dell	Inspiron One 2305 touchs	C2D i5	2800	6000	w7-64	hes146-mn-w7	5TLDBQ1		CURRENT (FHX1NQ1-33735	Jun-12
146	Niland	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h146-w7-nm	8MYLWW1			February 2013
148	Bragg	Computer	Laptop	Dell	vostro 3550	core i3	2200	4000	w764		J08NMR1			March 2012
148	Kieth	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h148-w7-RK	6HZLWW1			February 2013
148	Plante	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	5	9HZLWW1			February 2013
148	Bragg	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	h152-xplaptop	C7JPLK1		Snell, used with smartboard 14	7/30/2009
148	Bragg	Computer	Desktop	HP	Compaq dc7800 SFF	core3	2394	4001	хр	HES118-XP-1	MXL83704LZ		[o#320130 HP PC46592] 1688	sept 2010
148	Bragg	Computer	Desktop	HP	Compaq dc7800 SFF	core3	2394	4001	хр	HES118-XP-2	MXL748082K		HORTONTBS	
149	Adams	Computer	Desktop	Dell	Inspiron One 2305	D Athlon 6	4X2	4000	w7	hes149-touch	DX4NSM1		4-27-12 WARR EXP	12/29/2010
149	Adams	Computer	Laptop	Dell	latitude e5520	Core i3		4000	w7	hes149-w7-ja	4DJ8CT1		sped	May 2012
149	McNerney	Computer	Laptop	Dell	Latitude E5520	C2D		4000	w7		HJ6RKQ1			Aug 2011
151	Steadman	Computer	Desktop	Dell	Inspiron One 2305 touchs	D Athlon 6	4X2	4000	w7-64	HES147-W7-BG	FHX3NQ1		School TRUST	10/20/11
151	Steadman	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h147-w7-BG	9NZLWW1			February 2013
152	bridges	Computer	Desktop	Dell	Vostro 200	DC	4000	1024	XP	H134-XP-EK	7ZL06H1		DNR 2014	Aug 2008
152	Walker	Computer	Laptop	Dell	Latitude E5530	i3	2200	4000	w7	HMATHY1-2	2YP48W1			DEC 2012
152	Bridges	Computer	Desktop	Dell	Vostro 200	C2D		2048	V	BRIDGES-02	1PS82F1			Nov 2007
207	Bassage	Computer	Desktop	HP	Compaq dc7800 SFF	core2	2394	4000	хр	HES118-XP-3	MXL83016J9		[o#320130 HP PC46592] 1688	Sept 2007
207	Bassage	Computer	Laptop	Dell	latitude e5520	i3	2200	4000	w7-64	h207-w7-ab	3S6WBT1			May 2012
207	bassage	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	H207-1520XP	F7JPLK1		Sullivan	7/30/2009
207	bassage	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	H207-1520XP2	D6JPLK1		Ayles	7/30/2009
208	Accorsi	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h208-w7-ja	6LXLWW1			February 2013
208	Accorsi	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	1	6MXLWW1			2/8/13

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	sset T	COMMENT	INST-DATE
211	Sullivan	Computer	Desktop	Gateway	E4100	4	2600	240	XP	HES211	0032890189			2003
211	Sullivan	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h211-w7-as	J80MWW1			February 2013
211	Sullivan	Computer	Desktop	Dell	Optiplex 745	DC		2048	XP	b193-xp-dl	HRH80D1		Boisvert TBS	5/29/07
211	Sullivan	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h211-w71520	G6JPLK1		updated to 4gb, w7	7/30/2009
213	Moore	Computer	Desktop	Gateway	E4000 DNR	4	2400	512	XP	HES213-XP	0031555231		DNR	2003
213	Moore	Computer	Desktop	Dell	Vostro 200	DC	4000	1GB	XP	HES213-DELL-XP	5ZL06H1			Aug 2008
213	Moore	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	HES213-W7-JM	B37J5S1		24138655489-NEWJAN2012	Jan 2012
214	Crittendon	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	hes124-w7-pc	B37H4S1		24138560881 - NEW JAN201	1/21/12
214	Crittendon	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	v1520-w7-5	C6JPLK1		w7	7/30/2009
214	Crittendon	Computer	Desktop	IBM	Desktop	DC		1024	хр	H134-XP-EKRANZ	LKDZYNG		DNR, WIRELESS BELKIN CA	April 2008
217	Cullinane	Computer	Desktop	HP	dc 500 SFF	4	2800	248	XP	HES-RM207-01-XP	HP2UA5090FQN	I		2009
217	Cullinane	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	HES207-W7-RC	B37F4S1		24138467569 - NEWJAN2012	Jan 2012
217	Cullinane	Computer	Desktop	Dell	Dim 2400	cel		1250	хр	hes217-xp-2400	J9S2M51		donated by Ruth Schemel's sis	Sept 2004
219	Ambrosino	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	h219-w7-ca	3H1MWW1			February 2013
220	Marya	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	HES220-W7-SM	B37J4S1		24138654193-NEWJAN2012	Jan 2012
221	sped	Computer	Desktop	Dell	Optiplex 360	DC	2500	2048	хр	hes136-xp-360	4VVBCK1			July 2009
221	sped	Computer	Desktop	Dell	Optiplex 360	DC	2500	2048	хр	hes221-xp-360	4VW0CK1			July 2009
221	sped	Computer	Desktop	Dell	Optiplex 360	DC	2500	2048	хр	hes226-xp-360	4VVZBK1			July 2009
221	Khurana	Computer	Laptop	dell	Latitude E5530	corei5		8000	w7	H221-w7-mk	8JJ2VY1			11/11/13
221	Khurana	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	hes-xp1520-1	78JPLK1		Kittredge, marisa khurana 2-1-	7/30/2009
221	Route	Computer	Laptop	Dell	latitude e5520	Core i3		4000	w7	hes136-w7-tr	4DJ9CT1		SPED	May 2012
223	Hurley	Computer	Desktop	Dell	Vostro 200	DC	4000	1024	XP	HES223-DELL-XP	9ZL06H1			Aug 2008
223	Hurley	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	HES223-W7-KH	B37F5S1			Jan 2012
224	Cheveralls	Computer	Desktop	Dell	Vostro 200	DC	4000	1024	XP	HES224-DELL-XP	BZL06H1			Aug 2008
224	Cheveralls	Computer	Laptop	Dell	Latitude e5520	corei3	4400	4000	w7-64	HES214-W7-MC	B37G4S1			Jan 2012
224	Cheveralls	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	hes-xp1520-7	57JPLK1		Hopkins	7/30/2009
226	Kittredge	Computer	Laptop	Dell	Latitude e5520	Core i3	2200	4000	w7	H226-W7-KK	42THKV1			Sept 2012
226	Kittredge	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	h-spare-13	76JPLK1		Kieth, wilkinson	7/30/2009

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	set T	COMMENT	INST-DATE
229	Cregan	Computer	Laptop	Dell	Latitude E5520M	C2D		4000	w7-64	heslab-w7-mc	B33FMQ1		NEW2011SEPT	9/13/11
230	Piche	Computer	Desktop	Gateway	E-4500S	4	3400	504	XP	HES_RM230_DP_XP	0037081303		DNR	2005
230	Piche	Computer	Laptop	Dell	Latitude e5520	Core i3	2200	4000	w7	TBA				Sept 2012
230	Piche	Computer	Desktop	Dell	Optiplex 360	DC		2048	хр	hes208-xp-360	4VVYBK1		106-352-501-77	July 2009
230	Donnellan	Computer	Laptop	Dell	Latitude E5500	C2D		2052	XP	hes-sped-lat1	FPBLJK1			July 2009
216	Ramirez	Computer	Laptop	Dell	Latitude e5530	core i5		8000	w7	h236-w7L-VR	194NSY1			10/10/13
216	Donnellan	Computer	Laptop	Dell	Latitude E5500	C2D		4	w7	hes-spedw7-4	1QBLJK1		ram/w7-upd-jan2014	July 2009
216	Donnellan	Computer	Laptop	Dell	Latitude E5500	C2D		4	w7	hes-spedw7-1	CPBLJK1		ram/w7-upd-jan2014	July 2009
216	Donnellan	Computer	Laptop	Dell	Latitude E5500	C2D		2051	XP	hes-sped-lat3	HPBLJK1			July 2009
216	Donnellan	Computer	Laptop	Dell	Latitude e5520	Core i3		4000	w7	hsped-lions2	21LNBT1		SPED LIONS (Community Se	June 2012
216	Donnellan	Computer	Laptop	Dell	Latitude e5520	Core i3		4000	w7	hsped-lions1	21LPBT1		SPED LIONS (Community Se	June 2012
216	Ramirez	Computer	Desktop	Dell	GX520	4	2800	512	XP		6DQV0C1		DNR-replaced by laptop	10/26/06
CART	CART	Computer	Laptop	Gateway	M460	4	1800	512	XP	replace-9	0035863613		Bragg - needs work-replace 9	2006
CART	CART	Computer	Laptop	Gateway	M460	Centrino	1729	512	хр	hescart-6	0035863614		reale april 2012	2006
CART	CART	Computer	Laptop	Dell	Vostro 1000	4	1795	896	XP	HESCART18	444SJF1		Chapman, borrowed beth	1/26/2008
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HESCART10	0038984019			2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HESCART11	0038984021			2006
CART	CART	Computer	Laptop	Gateway	Gateway	4	1663		XP	HESCART12	0038984023		missing-keys-	2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HES CART 13	0038984018			2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HES CART 14	0038984017			2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HESCART15	0038984024			2006
CART	CART	Computer	Laptop	Gateway	Gateway	4	1663	512	XP	HESCART4	0036416488			2006
CART	CART	Computer	Laptop	Gateway	Gateway	4	1663	512	XP	HESCART5	0036416491			2006
CART	CART	Computer	Laptop	Gateway	Gateway	4	1663	512	XP	HESCART1	0036485873			2006
CART	CART	Computer	Laptop	Gateway	Gateway	4	1663	512	XP	HESCART7	0036416487			2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HESCART8	0038591414			2006
CART	CART	Computer	Laptop	Gateway	M465-E	C2D	1663	1024	XP	HES CART 3	0036416492		needs work	2006
CART	CART	Computer	Laptop	Dell	Vostro 1000	4	1795	896	XP	hescart20	944SJF1		crittendon	1/26/2008

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	set T	COMMENT	INST-DATE
CART	CART	Computer	Laptop	Dell	vostro 1000	4	1795	896	XP	hescart19	644SJF1		Hurley	1/26/2008
CART	CART	Computer	Laptop	Dell	Vostro 1000	4	1795	1024	XP	HESCART-21	1WGVRF1		renamed from 2	1/26/2008
CART	CART	Computer	Laptop	Gateway	Gateway	C2D		1024	XP	HESCART-2	0038984022		Smart Board (powerbutton-wat	2006
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab01	FL4ZNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab02	FL11PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab03				April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab04				April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab05				April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab06				April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab07	FL4WNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab08	FL40PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab09	FL3ZNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab10	FL6ZNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab11	FL2XNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab12	FL3XNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab13	FL2ZNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab14	FL10PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab15	FL6XNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab16	FL70PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab17	FL5XNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab18	FL5ZNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab19	FL50PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab20	FL5WNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab21	FL6WNS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab22	FL30PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab23	FL60PS1			April 2012
CompLab01	Cregan	Computer	Desktop	Dell	Vostro 260	Corie i3	3300	4000	w7	HLab24	FL1XNS1			April 2012
CompLab01	CompLab01	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h-spare-12	C5JPLK1		3-5-14 Hes lab	7/30/2009

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	sset T COMMENT	INST-DATE
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-1	97QRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-2	98PRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-3	98TRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-4	98SRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-5	98MPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-6	98NRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-7	98TPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-8	97LRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-9	98VPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-10	98VQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-11	98QQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-12	98QPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-13	98RPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-14	98SPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-15	98NQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-16	98RRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-17	98VRSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-18	98TQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-19	98RQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-20	98PPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-21	98WPSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-22	98MQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-23	98SQSW1		3/5/13
CompLab02	Cregan	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7	Hlab2-w7-24	98MRSW1		3/5/13
CompLab02	CompLab02	Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	w7	v1520-lw7-02	87JPLK1	3-5-14 Hes lab	7/30/2009
COPY	Monsen	Computer	Laptop	Dell	Latitude E5520	C2D		4000	w7		HJ6PKQ1	sped	Aug 2011
gym	Kelley	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	hgym-w7-bk	BXXLWW1		February 2013
hes office	McKenna	Computer	Laptop	Dell	Vostro 1000	4		1024	хр	?	744SJF1	wilkinson, yearbook software j	1/26/2008

#### HES Computer Inventory as of 5/6/14

ROOM	name	type	Sub-Type	Brand	Model	CPU	PU (MHZ	RAM	os	HOST NAME	SERIAL	set T	COMMENT	INST-DATE
IT bromfield	Accorsi	Computer	Laptop	Dell	Vostro 1520	Cel	2200	4	w7	h208-1520w7-ja	F6LPLK1		updated RAM/64bitw7 jan2014	7/30/2009
IT bromfield		Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	HESCART17	D7JPLK1		Accorsi feb21-2012 chassis re	7/30/2009
IT bromfield		Computer	Laptop	Dell	Vostro 1520	Cel	2200	2048	XP	hes-xp1520-7	28JPLK1		Gould	7/30/2009
IT bromfield	Gilfix	Computer	Laptop	Dell	VOSTRO 1000	4	1795	896	XP	Smart03XP	244SJF1		Cullinane, not 8, but not updat	1/26/2008
Library	Library	Computer	Desktop	Dell	3020						1L9LH02		FIND comp to replace in lib	3/15/14
Library	Serpa	Computer	Laptop	Dell	Latitude E5510	c2d	4000		w7		J9JW4N1		gretchen	7/26/10
Library	Library	Computer	Desktop	Dell	GX520	4	2800	512	XP	RM241-XP-GX520	4DQV0C1		not 8, but not updatable to w7	10/26/06
Library	library	Computer	Laptop	Dell	Vostro 1000	4	1800	1024	хр	HES_Loaner01	42HVRF1		12-11-13 in closet	3/2/2008
Library	library	Computer	Desktop	hp	dc5000sff	4		512	хр		2UA5090FQQ			2007
Library	library	Computer	Desktop	hp	dc5000sff	4		512	хр		2UA5090FQP			2007
library	library	Computer	Desktop	Dell	Vostro 200	DC	4000	1024	XP	HESLIBRARY-XP-1	6ZL06H1		user library0	Aug 2008
Library	library	Computer	Desktop	Dell	Vostro 270	Core i3		4001	w7		3SMNYU1		Circulation desk	2012
library	Quaadgras	Computer	Laptop	Dell	Latitude e5530	Core i3	2400	4000	w7	2	1NZLWW1			February 2013
Library	library	Computer	Desktop	Dell	vostro 270s	Corie i3	3300	4000	w7		98PQSW1		extra from lab	3/5/13



#### **Introduction for Current Aerohive Wireless Access Points**

The report on the following pages discusses our current Aerohive wireless access point locations. Of particular interest are the maps contained within the report. These maps show the current locations of the access points along with their actual coverage at both schools. As you can see, we do not have 100% coverage across the district.

While the Aerohive system has increased our wireless coverage and density from prior years, we still suffer from "dead" areas where staff and students cannot connect to our network. It has been determined that we need to not only move the locations of the access points, but to also increase the number of access points to achieve a near 100% coverage across the district.



# **Aerohive Planning Report**

#### Introduction

Thank you for using the Aerohive Planning Tool. This tool is designed to help scope and plan a WiFi Deployment to determine the number of APs required to achieve an intended coverage, AP placement and datarates. This tool calculates the loss in signal strength as it passes through open air and various materials to show predicted coverage.

#### **RF Prediction with Optional Site Survey**

An RF prediction is an estimate of WLAN performance and coverage. It uses intelligent algorithms to examine AP behavior based upon an imported floor plan with assigned building characteristics. The accuracy of an RF prediction is dependent upon the confidence level with which the building's RF characteristics are assigned, and the accuracy of AP placement. It is ideal for typical office environments with uniform wall types. In addition RF itself can be unpredictable, due to the difficulty of characterizing the behavior of RF when interacting with various materials.

Complex environments should be verified with a survey to verify the assumptions used in an RF prediction.

#### **Assumptions**

The guidelines in this document are based on the following conditions and assumptions:

- Client Data Terminal Transmit (Tx) Power: >=15 dBm.
- Client Data Terminal Antenna Gain: >=0 dBi.
- The map environment type (e.g. Warehouse, Office) relates to an average density which is quantified as a path loss exponent value. It estimates how quickly an RF signal attenuates with distance.
- The indicated wall path-through loss number (e.g. 12dB for a concrete wall) is the attenuation of an RF signal as it travels through the wall under a right angle. For any other angle, the loss will be higher.
- The EIRP (Effective Isotropic Radiated Power) of an AP's radio is determined by the Tx power setting, the antenna gain and cable losses. The antenna gain is an average gain obtained through measurements for the different AP types.
- Data rates are based on receive sensitivity numbers obtained through measurements for the different AP types, and a fade margin which is user configurable.

Note: These assumptions are typical for available 802.11 client Data Terminals and typical cubicle densities.



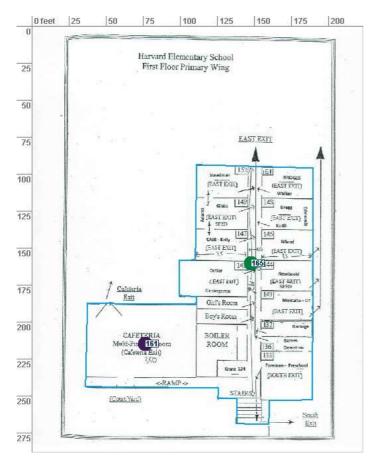
#### 1. Current

#### **Device Total For Current**

Model	Part number	Total
AP330	AH-AP-330-N-FCC	15
AP350	AH-AP-350-N-FCC	9

## 1.1 Hildreth Elementary School\_i\_1

### 1.1.1 Building view



#### First Floor Primary Wing

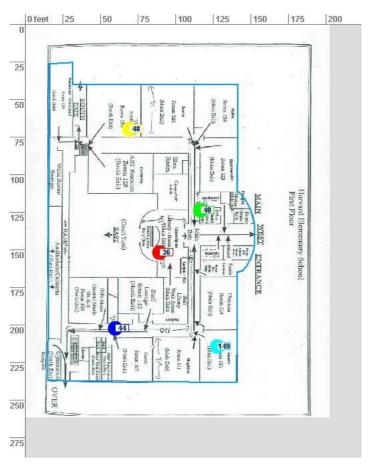
Number of APs 2
Service Area 1

Service Area 17064 sq ft Average Area per AP 8532 sq ft

Floor Alignment

X: 0 feet Y: 0 feet





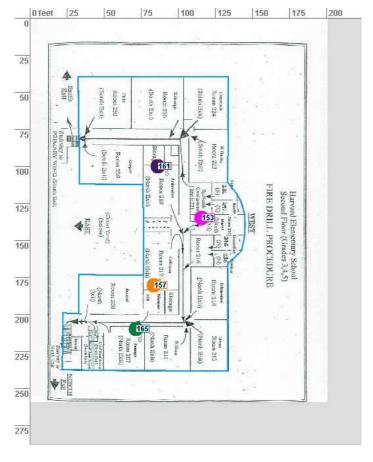
#### **First Floor**

Number of APs

Service Area 25443 sq ft Average Area per AP 5089 sq ft

Floor Alignment

X: 0 feet Y: 0 feet



#### **Second Floor**

Number of APs

Service Area 18117 sq ft Average Area per AP 4529 sq ft

Floor Alignment

X: 0 feet Y: 0 feet

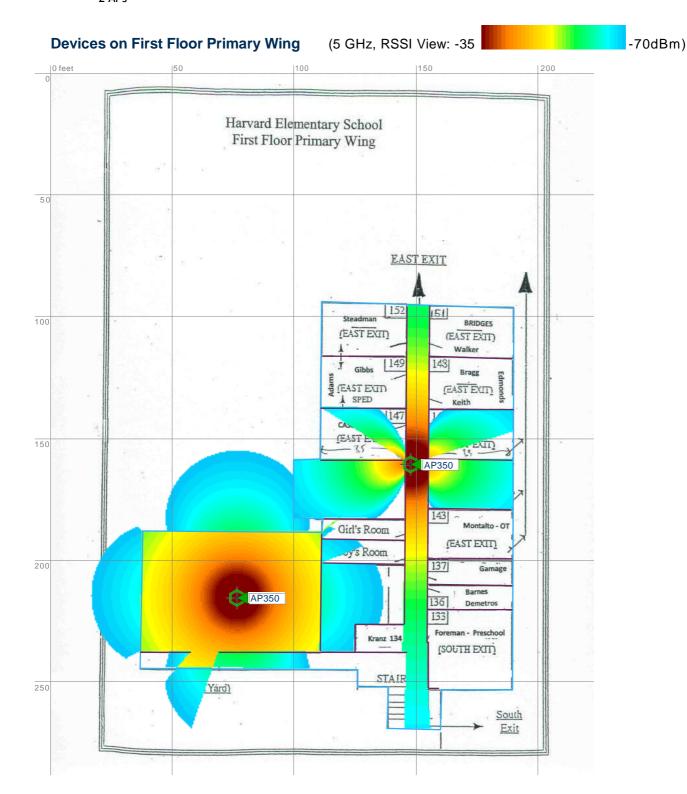


#### 1.1.2 First Floor Primary Wing

#### **Summary**

Number of Devices assigned to First Floor Primary Wing

2 APs





#### **Device Details**

Name	Model	Туре	2.4 GHz		5 GHz		Description
Name	Model		Channel	Power	Channel	Power	Description
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(165)	20 dBm	
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(161)	20 dBm	

#### **Device Total For First Floor Primary Wing**

Model	Part number	Total		
AP350	AH-AP-350-N-FCC	2		

#### 1.1.3 First Floor

#### **Summary**

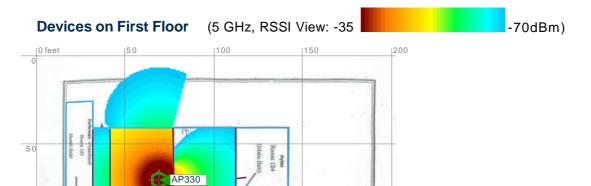
100

150

200

Number of Devices assigned to First Floor

• 5 APs



AP350

AP350

AP350



#### **Device Details**

Mama	Model	Туре	2.4 GHz		5 GHz		Description
Name			Channel	Power	Channel	Power	Description
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(48)	20 dBm	
AP350	AP350	802.11n	Auto(1)	18 dBm	Auto(149)	15 dBm	
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(44)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(36)	20 dBm	
AP330	AP330	802.11n	Auto(1)	17 dBm	Auto(40)	14 dBm	

#### **Device Total For First Floor**

Model	Part number	Total		
AP330	AH-AP-330-N-FCC	3		
AP350	AH-AP-350-N-FCC	2		

#### 1.1.4 Second Floor

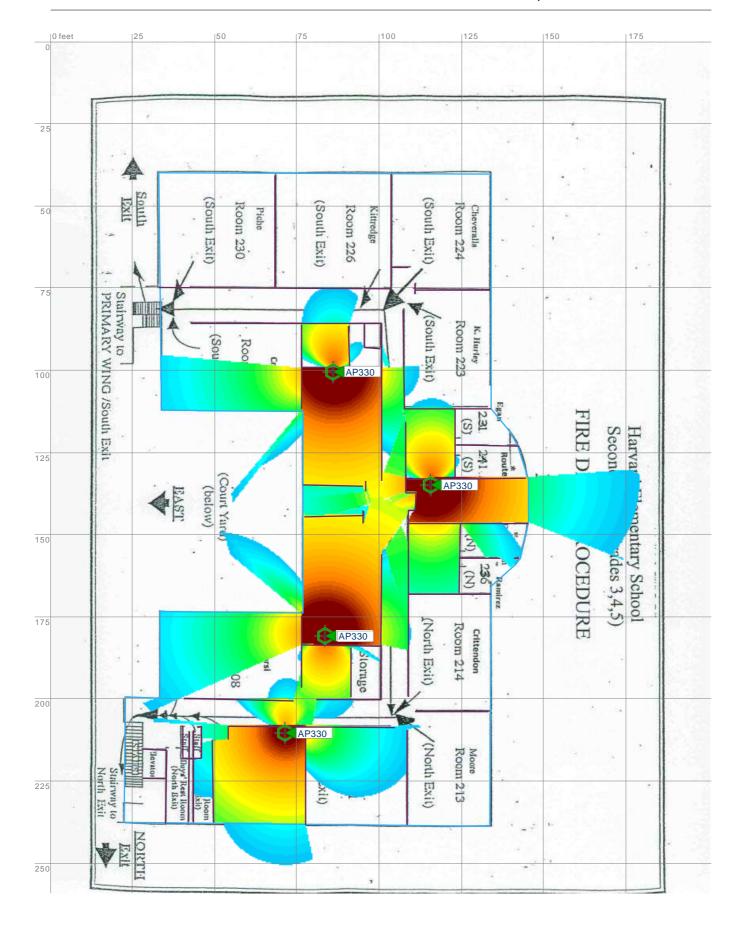
#### **Summary**

Number of Devices assigned to Second Floor

• 4 APs

Devices on Second Floor (5 GHz, RSSI View: -35 -70dBm)







#### **Device Details**

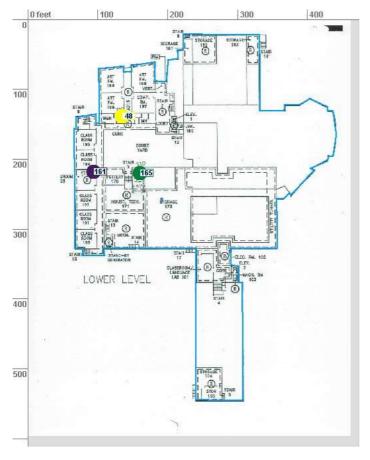
Nama	14 - d - l	T	2.4 GHz		5 GHz		Description
Name Model		Туре	Channel	Power	Channel	Power	Description
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(153)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(161)	20 dBm	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(157)	20 dBm	
AP330	AP330	802.11n	Auto(6)	17 dBm	Auto(165)	14 dBm	

#### **Device Total For Second Floor**

Model	Part number	Total		
AP330	AH-AP-330-N-FCC	4		

# 1.2 Bromfield High School\_i\_1

## 1.2.1 Building view



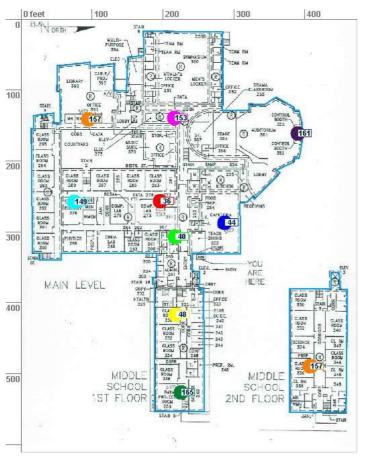
#### **Lower Level**

Number of APs 3
Service Area 98961 sq ft
Average Area per AP 32987 sq ft

Floor Alignment

X: 0 feet Y: 0 feet





#### 1st&2nd Level

Number of APs 10

Service Area 117086 sq ft Average Area per AP 11709 sq ft

Floor Alignment

X: 0 feet Y: 0 feet

#### 1.2.2 Lower Level

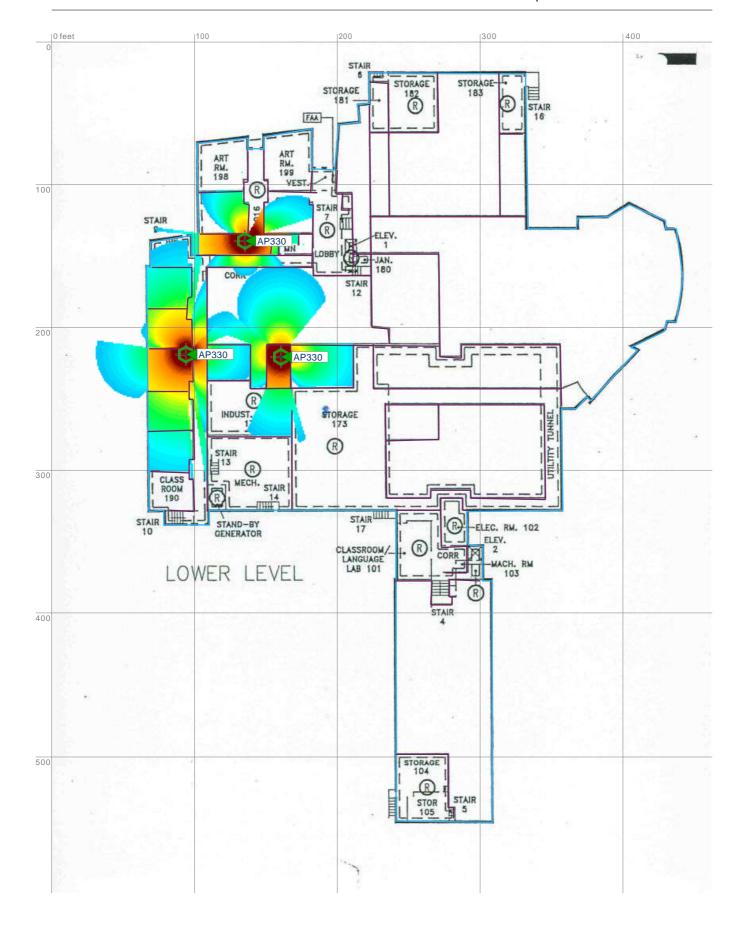
#### **Summary**

Number of Devices assigned to Lower Level

• 3 APs

Devices on Lower Level (5 GHz, RSSI View: -35







Name Madel		Type	2.4 GHz		5 GHz		Docarintian
Name Model	Туре	Channel	Power	Channel	Power	Description	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(165)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(161)	20 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(48)	20 dBm	

#### **Device Total For Lower Level**

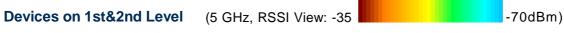
Model	Part number	Total		
AP330	AH-AP-330-N-FCC	3		

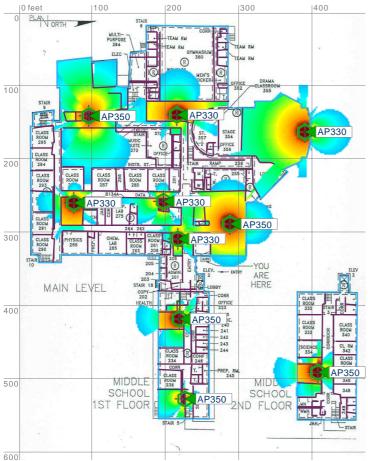
### 1.2.3 1st&2nd Level

### **Summary**

Number of Devices assigned to 1st&2nd Level

• 10 APs







Name	Model	Tuno	2.4	GHz	5 GHz		Description
Name	Model	Туре	Channel	Power	Channel	Power	Description
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(44)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(36)	20 dBm	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(153)	20 dBm	
AP350	AP350	802.11n	Auto(1)	20 dBm	Auto(157)	20 dBm	
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(165)	20 dBm	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(40)	20 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(149)	20 dBm	
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(157)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(161)	20 dBm	

### **Device Total For 1st&2nd Level**

Model	Part number	Total		
AP330	AH-AP-330-N-FCC	5		
AP350	AH-AP-350-N-FCC	5		



### **Introduction for Proposed Aerohive Wireless Access Points**

The report on the following pages discusses the proposed Aerohive wireless access point locations. Of particular interest are the maps contained within the report. These maps show the proposed locations of the access points along with the actual coverage that we will achieve with all access points when installed. As you can see, not only will we achieve near 100% coverage from the proposed access points, we will also increase the density needed to support a 1:World initiative.

Chris Boyle, Technology Director, has worked with Aerohive engineers to develop the proposed locations. Along with the locations, the type of access points needed to ensure the proper density was also identified. Through this process it was determined that we would need to add an additional 34 access points to our current 24 access points, which will achieve the coverage and density we require for both schools.



# **Aerohive Planning Report**

#### Introduction

Thank you for using the Aerohive Planning Tool. This tool is designed to help scope and plan a WiFi Deployment to determine the number of APs required to achieve an intended coverage, AP placement and datarates. This tool calculates the loss in signal strength as it passes through open air and various materials to show predicted coverage.

#### **RF Prediction with Optional Site Survey**

An RF prediction is an estimate of WLAN performance and coverage. It uses intelligent algorithms to examine AP behavior based upon an imported floor plan with assigned building characteristics. The accuracy of an RF prediction is dependent upon the confidence level with which the building's RF characteristics are assigned, and the accuracy of AP placement. It is ideal for typical office environments with uniform wall types. In addition RF itself can be unpredictable, due to the difficulty of characterizing the behavior of RF when interacting with various materials.

Complex environments should be verified with a survey to verify the assumptions used in an RF prediction.

#### **Assumptions**

The guidelines in this document are based on the following conditions and assumptions:

- Client Data Terminal Transmit (Tx) Power: >=15 dBm.
- Client Data Terminal Antenna Gain: >=0 dBi.
- The map environment type (e.g. Warehouse, Office) relates to an average density which is quantified as a path loss exponent value. It estimates how quickly an RF signal attenuates with distance.
- The indicated wall path-through loss number (e.g. 12dB for a concrete wall) is the attenuation of an RF signal as it travels through the wall under a right angle. For any other angle, the loss will be higher.
- The EIRP (Effective Isotropic Radiated Power) of an AP's radio is determined by the Tx power setting, the antenna gain and cable losses. The antenna gain is an average gain obtained through measurements for the different AP types.
- Data rates are based on receive sensitivity numbers obtained through measurements for the different AP types, and a fade margin which is user configurable.

Note: These assumptions are typical for available 802.11 client Data Terminals and typical cubicle densities.



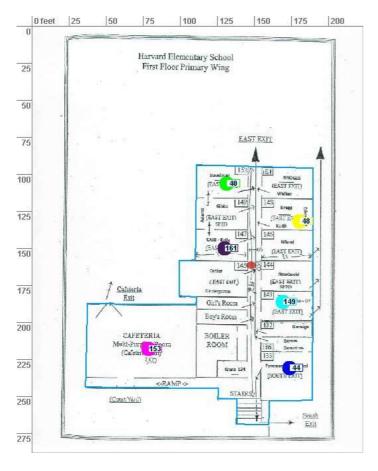
### 1. Proposed

### **Device Total For Proposed**

Model	Part number	Total
AP330	AH-AP-330-N-FCC	15
AP121	AH-AP-121-N-FCC	34
AP350	AH-AP-350-N-FCC	9

## 1.1 Hildreth Elementary School

### 1.1.1 Building view

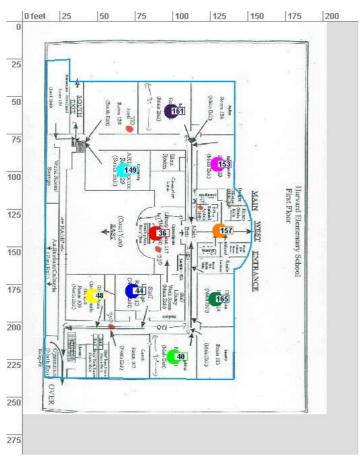


### First Floor Primary Wing

Number of APs 6
Service Area 17064 sq ft
Average Area per AP 2844 sq ft
Floor Alignment

X: 0 feet Y: 0 feet





#### **First Floor**

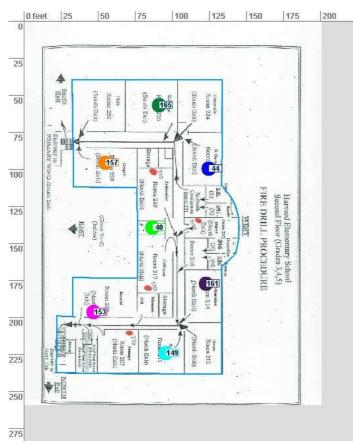
Number of APs

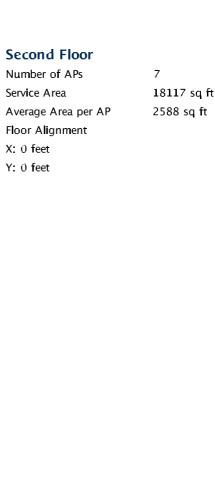
Service Area 25443 sq ft Average Area per AP 2827 sq ft

Floor Alignment

X: 0 feet

Y: 0 feet





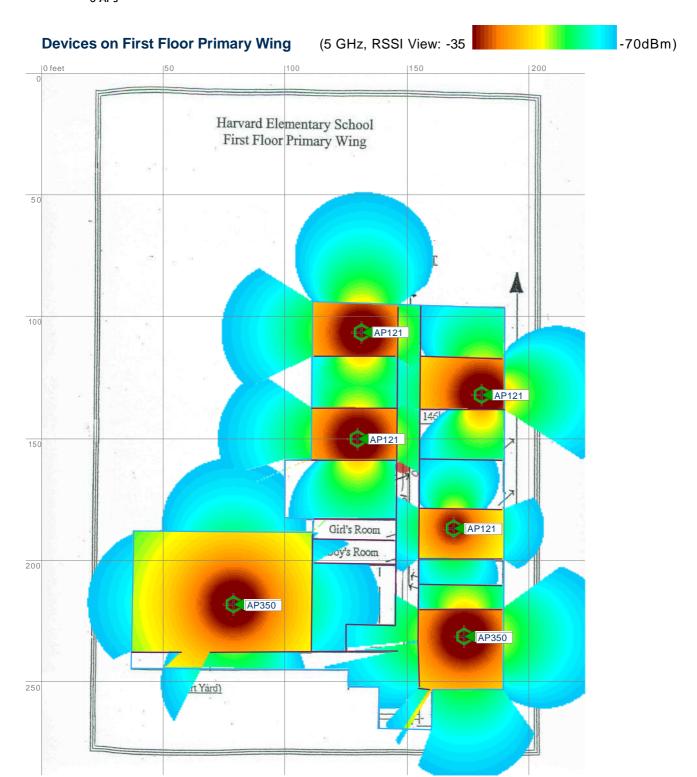


## 1.1.2 First Floor Primary Wing

### **Summary**

Number of Devices assigned to First Floor Primary Wing

6 APs





Nama	Model	Madel Tone	2.4 GHz		5 GHz		Description
Name Model	Model	Type	Channel	Power	Channel	Power	Description
AP350	AP350	802.11n	Auto(1)	20 dBm	Auto(153)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP121	AP121	802.11n	Auto(1)	17 dBm	Auto(149)	14 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(161)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(40)	20 dBm	
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(44)	20 dBm	

### **Device Total For First Floor Primary Wing**

Model	Part number	Total		
AP350	AH-AP-350-N-FCC	2		
AP121	AH-AP-121-N-FCC	4		

### 1.1.3 First Floor

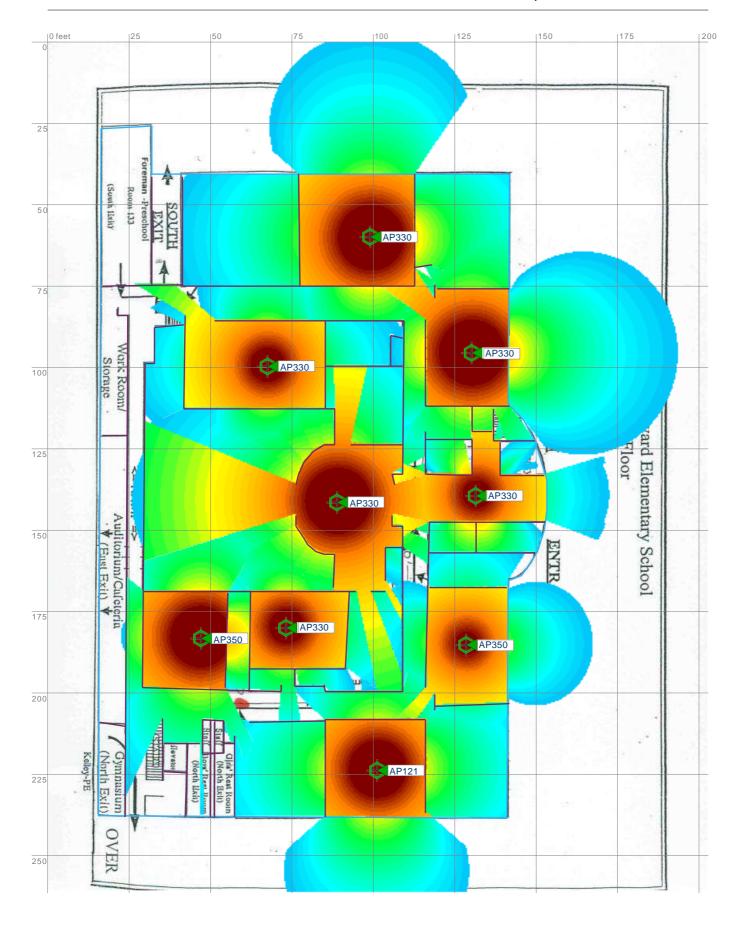
### **Summary**

Number of Devices assigned to First Floor

• 9 APs

Devices on First Floor (5 GHz, RSSI View: -35 -70dBm)







No	Model	T	2.4	GHz	5 GHz		Diti
Name	Model	Туре	Channel	Power	Channel	Power	Description
AP330	AP330	802.11n	Auto(1)	18 dBm	Auto(44)	15 dBm	
AP350	AP350	802.11n	Auto(6)	17 dBm	Auto(165)	14 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(36)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(153)	20 dBm	
AP330	AP330	802.11n	Auto(1)	18 dBm	Auto(149)	15 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(40)	20 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(161)	20 dBm	
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP330	AP330	802.11n	Auto(1)	17 dBm	Auto(157)	14 dBm	

### **Device Total For First Floor**

Model	Part number	Total
AP330	AH-AP-330-N-FCC	6
AP350	AH-AP-350-N-FCC	2
AP121	AH-AP-121-N-FCC	1

### 1.1.4 Second Floor

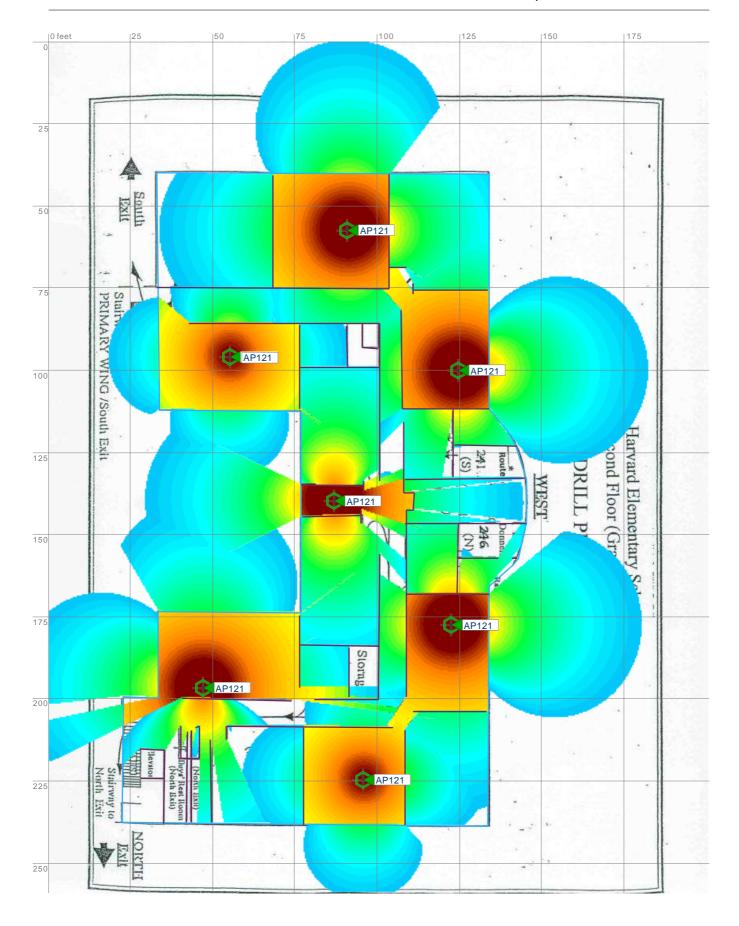
### **Summary**

Number of Devices assigned to Second Floor

• 7 APs

Devices on Second Floor (5 GHz, RSSI View: -35







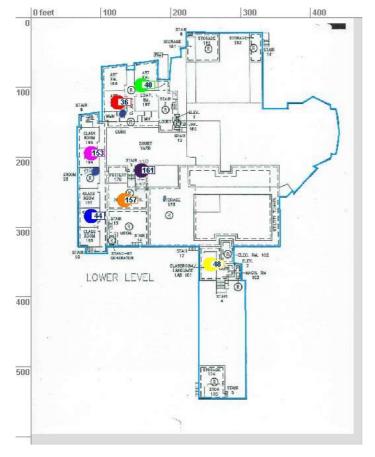
No Model		T	2.4	2.4 GHz		GHz	Description
Name Model	Туре	Channel	Power	Channel	Power	Description	
AP121	AP121	802.11n	Auto(6)	17 dBm	Auto(149)	14 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(44)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(153)	20 dBm	
AP121	AP121	802.11n	Auto(11)	17 dBm	Auto(157)	14 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(161)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(40)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(165)	20 dBm	

### **Device Total For Second Floor**

Model	Part number	Total		
AP121	AH-AP-121-N-FCC	7		

## 1.2 Bromfield High School

## 1.2.1 Building view



#### **Lower Level**

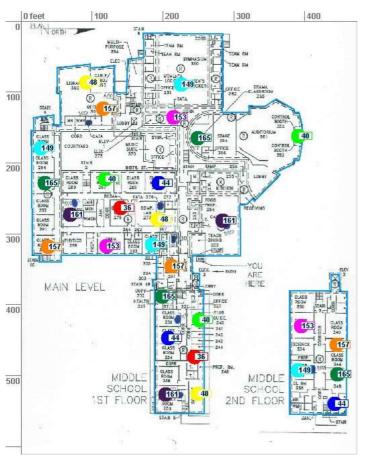
Number of APs 7
Service Area 98961 sq ft
Average Area per AP 14137 sq ft

Floor Alignment

X: 0 feet

Y: 0 feet





#### 1st&2nd Level

Number of APs 29

Service Area 117086 sq ft Average Area per AP 4037 sq ft

Floor Alignment

X: 0 feet Y: 0 feet

### 1.2.2 Lower Level

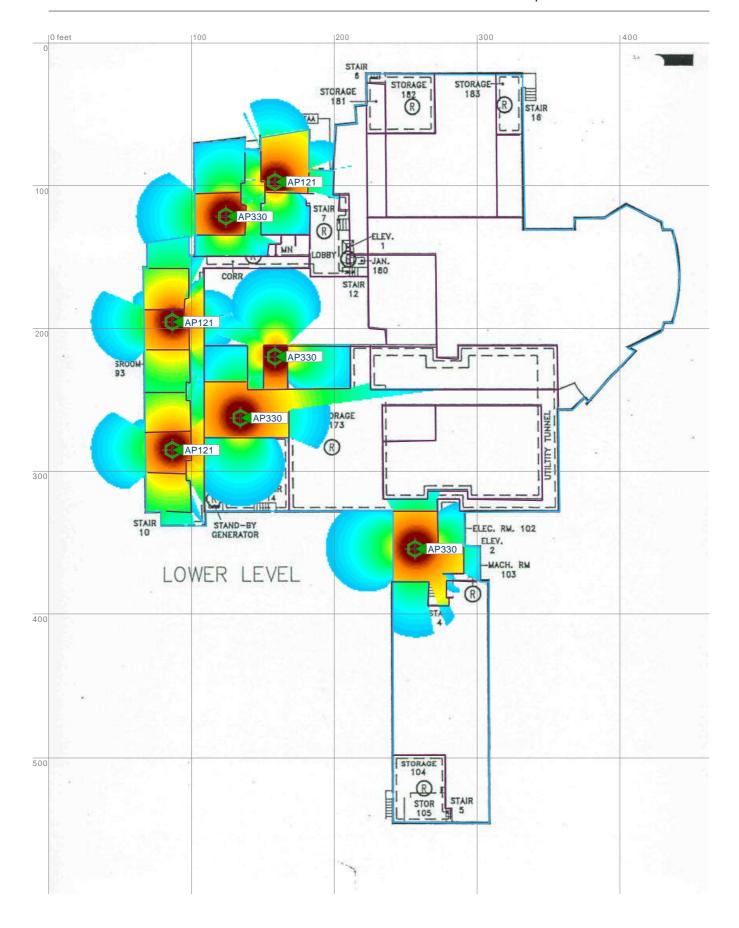
### **Summary**

Number of Devices assigned to Lower Level

• 7 APs

**Devices on Lower Level** (5 GHz, RSSI View: -35







Name Mede		Model Type	2.4	2.4 GHz		GHz	Description
Name	Model	Туре	Channel	Power	Channel	Power	Description
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(40)	20 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(161)	20 dBm	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(157)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(153)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(44)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(36)	20 dBm	

### **Device Total For Lower Level**

Model	Part number	Total
AP330	AH-AP-330-N-FCC	4
AP121	AH-AP-121-N-FCC	3

## 1.2.3 1st&2nd Level

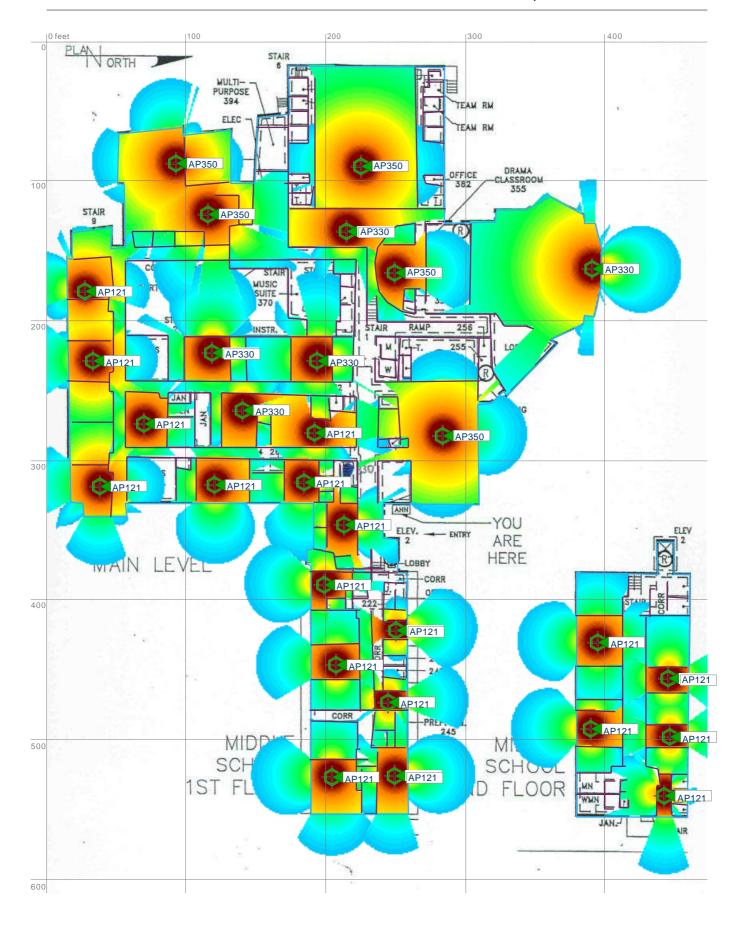
### **Summary**

Number of Devices assigned to 1st&2nd Level

• 29 APs

Devices on 1st&2nd Level (5 GHz, RSSI View: -35







Nama	Model	Time	2.4	GHz	5 (	GHz	Description
Name	Model	Туре	Channel	Power	Channel	Power	Description
AP350	AP350	802.11n	Auto(1)	20 dBm	Auto(149)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(149)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(153)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(149)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(161)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(153)	20 dBm	
AP330	AP330	802.11n	Auto(11)	20 dBm	Auto(36)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(48)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(165)	20 dBm	
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(165)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(44)	20 dBm	
AP350	AP350	802.11n	Auto(1)	20 dBm	Auto(161)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(40)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(44)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(165)	20 dBm	
AP330	AP330	802.11n	Auto(1)	20 dBm	Auto(44)	20 dBm	
AP350	AP350	802.11n	Auto(11)	20 dBm	Auto(157)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(157)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(157)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(161)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(157)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(40)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(40)	20 dBm	
AP121	AP121	802.11n	Auto(11)	20 dBm	Auto(165)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(36)	20 dBm	
AP121	AP121	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP121	AP121	802.11n	Auto(1)	20 dBm	Auto(149)	20 dBm	
AP350	AP350	802.11n	Auto(6)	20 dBm	Auto(48)	20 dBm	
AP330	AP330	802.11n	Auto(6)	20 dBm	Auto(153)	20 dBm	

### **Device Total For 1st&2nd Level**

Model	Part number	Total
AP330	AH-AP-330-N-FCC	5
AP350	AH-AP-350-N-FCC	5
AP121	AH-AP-121-N-FCC	19



	International Society for Technology in Education - Students					
By the end of each grade level, students should master the following skills. Skills in each grade level build on the skills from the previous year, often in a more advanced capacity.	Creativity and Innovation	Communication and Collaboration	Research and Information Fluency	Critical Thinking, Problem Solving, & Decision Making	Digital Citizenship	
Grade K students can	1	2	3	4	5	
use the appropriate tools to navigate within a program (e.g. mouse,						
keyboard, touch).						
log on and off a network device.						
locate the keys on a keyboard.						
open and close programs.						
Navigate to a preselected website.			Х	х		
Use a word processing program to type words.		x				
Use a word processing program to format words (color, size, font).		x				
Create images in select applications	Х					
Grade 1 students can	1	2	3	4	5	
Identifying hardware devices, (e.g. monitor, iPad, computer, mouse,						
keyboard, headphones, etc.)						
use a word processing program to type sentences.						
Use a word processing program to format sentences (color, size, font).						
use a word processing program to add pictures.						
Use a word processing program to resize a picture.						
Use a word processing program to move a picture.						
Print from a device.						
Use a graphing program to create a representation of data.						
Create and represent thinking graphically with visual learning						
program.						

### Hildreth Elementary School Technology Curriculum Map

use a keyboarding program to practice typing using home row					
keys.					
use a mouse to navigate menus, toolbars and scrollbars					
Grade 2 students can	1	2	3	4	5
use a word processing program to align text.					
use menu and toolbar options at an increased capacity.					
use the internet to conduct research on preselected websites.					
copy and paste images from a website into a document.					
demonstrate a basic understanding of copyright.					
create a basic slide show.					
use multimedia tools (audio, motion, etc.) to enhance a					
presentation.					
apply keyboarding practice to projects.					
demonstrate a basic understanding of digital citizenship.					
use pre-selected websites to practice classroom skills.					
Grade 3 students can	1	2	3	4	5
· · · · · · · · · · · · · · · · · · ·	1	2	3	4	5
Grade 3 students can	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine,	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine, tabs, windows, favorites, folders, URL, address bar, etc.)	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine,	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine, tabs, windows, favorites, folders, URL, address bar, etc.)  create bookmarks and folders in a web browser.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine, tabs, windows, favorites, folders, URL, address bar, etc.)  create bookmarks and folders in a web browser.  use a search engine to efficiently find useful websites for reasearch.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine, tabs, windows, favorites, folders, URL, address bar, etc.)  create bookmarks and folders in a web browser.  use a search engine to efficiently find useful websites for reasearch. toggle between multiple applications.	1	2	3	4	5
Grade 3 students can  create and organize files and folders in their network drive.  use spell-check to edit work.  modify documents and presentations for better layout and design.  use the Internet as a tool for learning and research.  understand and define Internet terms (web browser, search engine, tabs, windows, favorites, folders, URL, address bar, etc.)  create bookmarks and folders in a web browser.  use a search engine to efficiently find useful websites for reasearch.	1	2	3	4	5

### Hildreth Elementary School Technology Curriculum Map

T				
+				
1	2	3	4	5
+ +				
1	2	3	4	5
+				

1	Creativity and I	nnovation	Computer Tech I	Computer Tech II	Computer Tech III
	construct knowle	strate creative thinking, edge, and develop innovative ocesses using technology.			
	a.	apply existing knowledge to generate new ideas, products, or processes.	I (Introducing)	D (Developing)	M (Mastering)
	b.	create original works as a means of personal or group expression.	D	М	М
	C.	use models and simulations to explore complex systems and issues.		l	D
	d.	identify trends and forecast possibilities.			D

2 Comn	nunication and Collaboration			
comm at a di	nts use digital media and environments to unicate and work collaboratively, including stance, to support individual learning and oute to the learning of others. Students:			
a.	interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.		I (Introducing)	D (Developing)
b.	communicate information and ideas effectively to multiple audiences using a variety of media and formats.	I	D	M (Mastering)
c.	develop cultural understanding and global awareness by engaging with learners of other cultures.		I	D
d.	contribute to project teams to produce original works or solve problems.	I	D	D

3	Research	and Information Fluency			
		apply digital tools to gather, evaluate, iformation. Students:			
	a.	plan strategies to guide inquiry.	I (Introducing)	D (Developing)	M (Mastering)
	b.	locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.	I	D	M
	C.	evaluate and select information sources and digital tools based on the appropriateness to specific tasks.	I	D	M
	d.	process data and report results.	l	D	М

4 Critical T Decision	hinking, Problem Solving, and Making			
conduct re problems,	use critical thinking skills to plan and esearch, manage projects, solve and make informed decisions using e digital tools and resources.			
a.	identify and define authentic problems and significant questions for investigation.	I (Introducing)	D (Developing)	M (Mastering)
b.	plan and manage activities to develop a solution or complete a project.		l	D
C.	collect and analyze data to identify solutions and/or make informed decisions.	I	D	М
d.	use multiple processes and diverse perspectives to explore alternative solutions.		I	D

5	Digital Cit	izenship			
	societal iss	inderstand human, cultural, and sues related to technology and gal and ethical behavior. Students:			
	a.	advocate and practice safe, legal, and responsible use of information and technology.	I (Introducing)	D (Developing)	M (Mastering)
	b.	exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.	1	D	M
	C.	demonstrate personal responsibility for lifelong learning.	I	D	M
	d.	exhibit leadership for digital citizenship.	I	D	М

6	Technolog	gy Operations and Concepts			
		lemonstrate a sound understanding of concepts, systems, and operations.			
	a.	understand and use technology systems.	D (Developing)	D	M (Mastering)
	b.	select and use applications effectively and productively.	I (Introducing)	D	М
	C.	troubleshoot systems and applications.	I	D	М
	d.	transfer current knowledge to learning of new technologies.	I	D	М

Creativity and I	nnovation	Computer Graphics	Animation	Photography
Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:				
a.	apply existing knowledge to generate new ideas, products, or processes.	M (Mastering)	M (Mastering)	M (Mastering)
b.	create original works as a means of personal or group expression.	М	M	М
c.	use models and simulations to explore complex systems and issues.	М	М	М
d.	identify trends and forecast possibilities.	M	M	

2	Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:				
	a.	interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.			
	b.	communicate information and ideas effectively to multiple audiences using a variety of media and formats.	M (Mastering)	M (Mastering)	
	c.	develop cultural understanding and global awareness by engaging with learners of other cultures.			
	d.	contribute to project teams to produce original works or solve problems.			

3	Research and Information Fluency  Students apply digital tools to gather, evaluate, and use information. Students:				
	a.	plan strategies to guide inquiry.			
	b.	locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.	M (Mastering)	M (Mastering)	M (Mastering)
	c.	evaluate and select information sources and digital tools based on the appropriateness to specific tasks.	М	М	М
	d.	process data and report results.			М

4	Critical Thinking, Problem Solving, and Decision Making  Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:			
	a.	identify and define authentic problems and significant questions for investigation.		
	b.	plan and manage activities to develop a solution or complete a project.		M (Mastering)
	C.	collect and analyze data to identify solutions and/or make informed decisions.		
	d.	use multiple processes and diverse perspectives to explore alternative solutions.		
		diverse perspectives to explore		

5	Digital Citizenship  Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:				
			Introduce	Develop	Master
	a.	advocate and practice safe, legal, and responsible use of information and technology.			M (Mastering)
	b.	exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.			М
	C.	demonstrate personal responsibility for lifelong learning.			М
	d.	exhibit leadership for digital citizenship.	M (Mastering)	M (Mastering)	M