Bedford Public Schools' K-12 Technology Showcase

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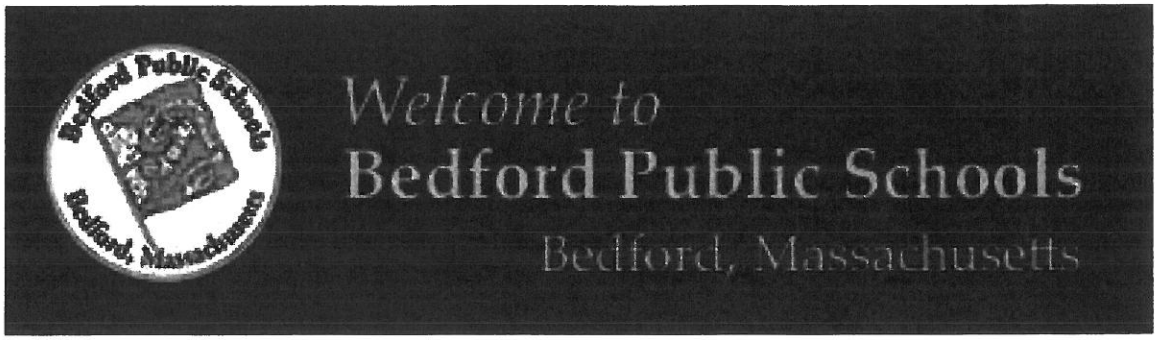

Welcome to the Bedford Public Schools' K-12 Technology Showcase. We are pleased you could join us to see how various technologies are being used as teaching and learning tools in Bedford's K-12 classrooms. Tonight you will hear from our students and learn how the use of technology enhances their learning and prepares them for the 21st century.

The Bedford Public Schools would like to thank the following groups of people for their dedication, hard work and continued support. This evening would not have been possible without their efforts.

- Thank you to our students for sharing their creativity and knowledge which help us to better understand the power of technology as an educational tool.

- Thank you to our teachers who continually work towards integrating technology in new and effective ways to enhance teaching and learning.

- Thank you to the Bedford Education Foundation for their generous contributions. Many of the projects you see tonight would not have been possible without their support.

- Thank you to the Bedford community which continually takes pride in and supports our schools.

Bedford High School Technology Projects

Presenters Grades/Course/Subjects	Project Descriptions	Room Locations
Students: AJ Huard and Kevin Altschuler Teacher: John O'Connor Grades: 11 and 12 Course: Robotics 2 ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Preschool Scooters** - Students built and programmed scooters sized for our preschool students. Each has the ability to move forward and backward, turn left and right, and were built based on measurements taken from the young children. Programming was completed with ROBOTC software on PC-based hardware and uploaded to Lego Mindstorms NXT computers attached to the robots. Additional components were designed with Creo software and built using the 3D Printer.	A 201D
Student: Ben Carroll Teacher: John O'Connor Grades: 11 and 12 Course: Robotics 1	**Running of the Bulls and Minesweeper** - Each team built and programmed their robots for a specific challenge using NXT-G software on PC laptops. Each project offers a different set of obstacles to overcome - sometimes with contradictory requirements. Students then compete with each other to determine the best or most effective design and program.	A 201D
Students: Branson Leonard and Wes Osborn Teacher: John O'Connor Grades: 11 and 12 Course: Drafting 1 and 2 ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**iPad Camera Support** - Students designed and built camera supports to be used in filming an iPad lesson/demonstration. This support was designed in Pro/ENGINEER Creo 2.0 CAD software using PC workstations. Drawings were printed on our wide media printer. Prototype parts were built by the students in the High School Woodshop and on our 3D printer.	A 201D
Student: Christopher Iwany Teacher: John O'Connor Grade: 12 Course: Drafting 3	**White Board Easel** – At the request of a middle school teacher, this student interviewed the teacher to determine requirements for constructing an easel based on an existing design the teacher liked. He measured the easel and then redesigned it using Creo 2.0 CAD software on his Drafting Workstation. He created detailed drawings, used them to build the parts in the Woodshop, stained and polyurethaned them, and finally assembled them together for her.	A 201D

Students: Brandon Jackson and Aaron Sisineros Teacher: Sarah Leshay Grade: 11 Course: Biology	**Apps in the Biology Classroom** - Over the course of the year, students have explored several different apps to expand their learning and help with visualization. Students will share their use of the app EarthViewer in relation to the history of Earth, their use of iCell to explore cellular structure, use of Cell Defense: The Plasma Membrane to explore membrane structure, and the Motic Camera to connect the microscope wirelessly to their iPads.	A 201D
Students: Felicia Barber and Angela Mortenson Teacher: Kim Comeiro Grade: 9 Course: Geometry	**Socrative** - The students will play the role of student and teacher to demonstrate the Socrative app. Socrative is a smart student response system that empowers teachers to engage their classrooms through the power of immediate response, feedback and data collection.	A 201D
Student: Paulita Logan Teacher: Kim Comeiro and Cia Gisone Grade: 9 Course: Math Intensive	**Hands On Equations** - The original Hands-On Equations program, using physical game pieces, has already helped more than a million students gain confidence with algebra. Now that same proven method is available on the iPad. The app takes advantage of the visual and touch features to help students see complex algebraic concepts.	A 201D
Student: Maiyan Montgomery Teacher: Carrie Taylor Grades: 9, 10, 11 and 12 Course: Foods and Nutrition	**International Bread Ed Café** - Students worked in groups to research bread from another country and answer questions about the history, geography, culture, and food preferences from that country. They were asked to describe the bread, take pictures, and research its significance to the people who prepare, eat, and perhaps celebrate holidays with the bread. They created Keynote presentations to share their findings with classmates during an Ed Café while they enjoyed Chinese Steamed Buns and tea which they had prepared.	A 213
Students: Maiyan Montgomery and Sarah Higgins Teacher: Carrie Taylor Grades: 9, 10, 11 and 12 Course: Foods and Nutrition	**Collaborative Electronic Heritage Cookbook** - The cookbook is a collaborative project with the San Juan School District in Fair Oaks, California. Mike Berry, the FACS teacher in CA, Maiyan Montgomery, who is presenting today, and I have been working together to create a cookbook, which will be published on both our web sites and will be expanded on each year. Each student will create and cook a family recipe at home, take pictures of the process, and create a Snapguide presentation of their work. Students will research and write about the background of their family's recipe and the country that it originated from. Each student will complete a self-evaluation and have a parent or adult evaluate their recipe and process.	A 213

Students: Jessika Rubin and Kyle Fan-Chan Teacher: Carrie Taylor Grades: 9, 10, 11 and 12 Course: Foods and Nutrition	**Live Class Chat** - This is a collaborative project with Mike Berry, a teacher in the San Juan School District in Fair Oaks, California. We recorded our respective Foods and Nutrition classes, shared our videos via YouTube and then used Google Hangouts to conduct a live chat session between the classes. We talked about the project and compared life in California versus life in New England.	A 213
Student: Sophia Kyron Counselors: Diane Ryan and Janel Halupowski Grade: 10 Offered by: Guidance Department	**BHS Guidance Department Uses of Technology** -The Bedford High School Guidance Department makes use of technology in broad and varied ways. Two thirds of all high school records for college applications, and almost all students' college applications are now submitted electronically. Counselors teach "Guidance Lessons" in the classroom, where students access the lesson through their iPads. This includes, for the first time, students requesting next year's classes in Aspen via their iPads.	A 213
Students: Fritz Stadtlander and Luke Barry Teacher: Kate Sussman Grade: 10 Course: Digital Art I	**Transformation Landscape Collage** - Students edited and seamlessly stitched together images they found, which were often surprising, to create believable images of landscapes in Photoshop. The class focused on mastery of scale, proportion, and atmospheric perspective to create the illusion of space. Students had to demonstrate proficiency with layers, masks, and adjustments in Photoshop.	A 214
Teacher: Christine Larimore Grade: 12 Course: Trigonometry, Statistics and Probability	**Targeted Feedback Using Moodle** – Students access the Quiz feature in Moodle and receive instantaneous targeted feedback on their progress towards meeting the content specific objective.	A 214
Students: Kira Perzel Mandell, Maddy Allen, Michaela Simoneau, and Kate Johnson Teacher: Mike Griffin Grades: 11 and 12 Course: AP Environmental Science	**Biodiversity in the Garden Boxes** - Students performed field documentation using the iPad and shared the info via Google Docs. The information was then analyzed in the lab using spreadsheets to perform calculate different Diversity Indexes. Field documentation included observational data on number and kinds of species and taking pictures of species.	A 214

Students: Kira Perzel Mandell, Maddy Allen, Michaela Simoneau, and Kate Johnson Teacher: Mike Griffin Grades: 11 and 12 Course: AP Environmental Science	**Pesticide Presentations** - Students used the iPad to receive the assignment and research on various pesticides. They were given the task to create an electronic presentation that met the criteria of the assignment. Many programs were used for the presentation including Prezi, PowerPoint, iMovie, Hakudeck, and many others. Students used Google Forms to provide peer editing for their group members on the initial presentations, which was accessed by students to improve their projects.	A 214
Students: Ben Klien, Dan Greany, and Zack Kreiter Teacher: Jerry Peters Grade: 9 Course: Algebra	**i4class** - i4class is an interactive teaching and assessment tool. Students are given instant feedback, have access to tutorials and step-by-step support on every problem they complete. Students can receive growth reports that show strengths and weaknesses and monitor their own progress on individual assignments, topics and units. Teachers, parents, and even tutors can be linked to individual students to see the same up-to-the-minute data concerning what a student has (or has not) completed as well as their current progress and growth reports.	A 214
Students: Andrew Latady, Lauren Granada, Christine West, Kelli Gagnon and Ryan Rhodes Teacher: Patrick Morrissey Grades: 10 and 11 Course: Algebra II	**Desmos Graphing Calculator App** - This free and easy to use graphing calculator iPad app allows students to graph functions, plot tables of data, and explore transformations with the sliders feature. Students can easily find a graph's intercepts, the intersection of two curves, and maximum and minimum points using Desmos. Try yourself at Desmos.com.	Library
Student: Kelsie Patterson Teacher: Larry Sheinfeld Grade: 9 Course: Art I	**iPad Projects** - Kelsie will be demonstrating the use of several iPad apps in the process of working on a few different Art I projects. - Kelsie used the iPad as her "subject" for a long-term portrait project. The reference photo was on her iPad so that she was drawing from it. After she completed her pencil rendering, she began working on her color version of the portrait. Kelsie took numerous in-progress photographs with her iPad camera, and then opened each of these photos (at various stages of completion) in Photoshop Express where she converted her color photo back into black and white. She compared this to her original drawing, to see if the values of her cool and warm colors were matching the original values of her drawing. - For a piece involving plant shapes, spatter painting, and the effective design of negative space, Kelsie photographed plants with her iPad, and used DrawCast to make contour drawings	Library

	from those photos. She opened the drawings in Photoshop where the various contour drawings were overlaid and composited, with scaling of each drawing and various amounts of rotation are possible. Students can also play with the relative placement of each drawing to get the most interesting negative spaces they can. Kelsie printed out the composite of contour drawings, which is the overall composition. These were overlaid onto dried splatter paintings that were created earlier. The negative spaces of the paintings were painted out with black to create an effective negative space composition. -Kelsie will also be "playing back" one or more drawings she has been working on at home using the iPad. These will demonstrate not only a bit about how the apps work but also her drawing process.	
Students: Shelby Wang and Becca Smith Teacher: Larry Sheinfeld Grades: 10 and 11 Course: Graphics	**Graphics Projects** - Shelby and Becca will be demonstrating their use of Photoshop in the creation of a variety of Graphics projects. Shelby will also be highlighting her use of a tablet, as she does a great deal of highly rendered illustrations, some of which she has incorporated into Graphics projects. Becca will demonstrate a photo-animation project she has done on her own.	Library
Students: Jared Rushanan, Joe Wirthlin, Sam Rackey and Nate Fisette Teacher: Patti Messenger Grade: 9 Course: English	**The Odyssey** - The assignment was to generate an essential question about The Odyssey, formulate a creative response in the medium (high or low tech) of their choice, and write a rationale defending their creative choices. Below are the student presenters' essential question and the technology they used to create their project. Jared Rushanan - *"What makes a good leader?"* Jared created a video newscast using MacBook Pro, Final Cut Pro X, 4 work lights, music stands, green screen, Canon t2i, Azden sgm-2x (shotgun microphone), audio cables, and tripod. Joe Wirthlin - *"How does Odysseus transform on his hero's journey?"* Joe created a stop-motion animation video using Legos, an iPad, a desktop computer, and Windows Movie Maker: Sam Rackey - *"Is the journey more important than the destination?"* Sam created a video game. Nate Fisette - *"What does Circe's island represent?"* Nate recorded an original song using Pocket Wave Pad.	Library

Students: Leah Roselli, Greg Barry, and Bryce Pierce Teacher: Lisa Morrison Grade: 11 Course: Biology ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Mastery Learning in a Schoology Classroom** - Schoology is an innovative learning management system that makes it easy to create and share academic content. The program offers extremely flexible self-paced learning features that allow teachers to design lessons that require students to master content before moving on to the next lesson. The online components of the system allow students to access material outside of the classroom and submit assignments from home. With notifications for both, student and teacher assignments are graded quickly to give students constructive feedback on their progress. This system allows students to access the curriculum material at their own pace and seamlessly integrate annotations and submission of work through Notability.	Library
Students: Uriah Wardlaw, Emily Moss and Jianna Lin Teacher: Peter Jacob-Dolan Grades: 10 and 11 Subject: English	**Writing Mentors** - In order to provide more individualized and timely feedback, this project pairs 6th grade students with high school (10th & 11th grade) mentors. The 6th graders use Google Docs to share the early drafts of their writing. Their mentors then provide feedback within the same online document -- reflecting on how the piece matches up with the expectations for the assignment and offering suggestions on how to revise or refine the work.	Library
Students: Austin Chap and Paul LeGrandeur Teacher: Sean McGowan Grades: 10, 11 and 12 Course: AP Physics B ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Science Sensors** - The students use the logger pro software and Vernier sensors to perform experiments. This particular experiment shows that the impulse is equal to the change in momentum. Because the duration of the impulse is so short (much less than 1 second) we could never perform this experiment with hand held timers.	Library
Teacher: Sean McGowan Grade: 9 Course: Physics	**Lab Experiment Videos** - The teacher does short video clips of procedures for laboratory experiments. Once the students are working in the lab, they can use the video clips to help them perform the experiment correctly. This helps the student to be independent and work at their own pace. It also gives the instructor time to address other issues and questions while the students are doing the experiment, so everyone has more time to collect data and comprehend the content.	Library

Students: Dana Shahar and Ryan Place Teacher: Patrick Culhane Grade: 11 Course: Modern American History	**The World War II Butterfly Effect** - Students had to create a 'what if' scenario in history. Choosing a significant event that occurred during World War II, students had to create a cause and effect chart showing the causes of the chosen event. Students then proceeded to alter a single cause of the event and establish how history would have played out differently. With their new history, students created a stop-motion film that recreated the revised history. Historians use this counterfactual history to help establish causation. While students were provided with a free iPad app, Stop Motion, to create the videos, these students elected to use professional software at home to enhance their videos.	Library

John Glenn Middle School Technology Projects

Presenters Grades/Course/Subjects	Project Descriptions	Room Locations
Student: Kevin McElroy Teacher: Cheryl Pespisa Grade: 7 Subject: English	**Reading Comprehension and Summarization Using UMapper -** This was a post reading project connecting 6th grade social studies and English curriculum benchmarks. Students used maps of Ethiopia and its capital city of Addis Ababa to identify and plot key events in which to summarize the plot and other literary elements from the story, Escape Under the Forever Sky.	A 201D
Teacher: Karen Burstein Grade: 7 Subject: Pre-Algebra ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Senteos In the Classroom** - The primary objective of using this technology is to swiftly and effectively collect and use relevant data to inform teaching practice. The benefits of using these tools include improved speed and accuracy in measuring student progress. Students receive immediate feedback from the Senteo clickers.	A 201D
Teacher: Karen Burstein Grade: 7 Subject: Pre-Algebra	**Excelling In Math** - Students used Excel to create a graphical representation (plot) of the coordinates they outlined for their cartoon. Using a formula column, they multiplied those coordinates by a scale factor to then create an enlarged graph of their cartoon.	A 201D
Student: Helen Pulizzi Teacher: Roseanne Ham Grade: 8 Subject: Life Skills	**Creating a Public Service Announcement (PSA) - Over** the course of the year, students create a prevention based PSA about a health topic. Students are responsible for researching their topic, planning, and creating their PSA. The technologies that are used in the process are Google Docs to share information between partners, Moodle to submit each project step, and Movie Maker to create and edit their PSA.	A 213
Student: Joseph Greaney Teacher: Tony Ruscitto Grade: 8 Subject: Tech Ed	**Floor Plan House Design Unit** - In this unit of study, students design floor plans for a single-family house. Using 3D Home Architect software, students work in pairs of 2 to complete house designs. Students are given a design challenge that presents design constraints. While designing houses, students study the functions of parts of a house.	A 214

Students: Martha Haviland and Evan Graf Teacher: Wendy Tanahashi-Works Grade: 7 Subject: French	**Une Lettre ä Brigitte (A Letter to Brigitte)** - Using a checklist of items, students were asked to describe themselves and their family in French as response to a letter written by Brigitte. Students wrote their letter on Google Docs and share it with two peer editors. Every student was given a Peer Edit checklist with grammar and content points to look at. One lab time was used to write the response while the peer editing portion was completed as two homework assignments. Students used the Comment feature in Google Docs. Peer editors highlighted words to be edited and wrote their comments on the side of the letter. The teacher did a third edit before the author made the final changes and checks "resolve" in the comment section. The final product, the draft, and the editing forms are used as writing assessments in the student's portfolio.	Library
Students: Mason Schalick and Isabelle Gitlin Teacher: Wendy Tanahashi-Works Grade: 7 Subject: French	**Ma Maison Idéale (My Dream House)** - Using the Google Free App Floor Plan, students designed and labeled in French several rooms on a one or two story house plan. The unit of study included French vocabulary words for directions and things found in a home. A supplemental list of furniture and objects as well as a list of how to put in accents was given to the students. At the end of the project, the students are expected to present their floor plans in French to their classmates by explaining what furniture is in the rooms as well as providing directionality as they move from room to room.	Library
Teacher: Rachel LeBlanc Grade: 8 Course: Reading Strategies ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Descriptive Language Unit** - Students used sensory input to describe objects related to autumn, such as yarn, cider, apples, and gourds. Students organized their descriptive language in Bubble Maps and wrote descriptive paragraphs. Students revised their written work and used Audioboo to record a read aloud of their descriptive paragraph. Students also recorded Think Alouds, reflecting on the learning process in the unit, including how the sensory experiences and Thinking Maps helped them more effectively produce a piece of descriptive writing. Students then created QR codes of their recordings. At the close of the unit, all reading classes spent one class period in the library sharing their work. Students used iTouches to scan their classmates QR codes and were able to hear each other's descriptive paragraphs, as well as the student Think Alouds, which reflected on their learning process.	Library
Students: Alan Wang Teacher: Josh Shaine Grade: 7 Subject: Pre-Algebra Pullout	**Pythagorean Theorem Proofs** - Students designed presentations of Pythagoras' proof that in a right triangle, the square of the two legs, added together, equals the square of the hypotenuse (longest side). Each one demonstrates the proof, with several different proofs done. While some students used Google Docs, others used Microsoft PowerPoint, and one provided a YouTube video, with narration.	Library

Teacher: Robin Talkowski Grade:7 Subject: Reading Strategies ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**From Readers to Filmmakers -** Being able to visualize text while reading is an important reading skill that improves reading comprehension. Using parts of the curriculum from the American Film Institute, students were taught different camera angles. They then used this skill to interpret a written scenario into a visual 30 second representation. One group of students analyzed an excerpt from the book, Trick or Treat, developed a storyboard specifying camera angles and action to interpret the written word, and then filmed their excerpt.	Library
Teacher: Jim Nagle Grade: 8 Subject: World History I	**Google Apps for Daily Use -** Students have used Google Apps throughout the school year for several small projects and assignments. They have utilized Google Docs for word processing and Google Drawing to create cause and effect diagrams. Later this year, they will use Google Presentation for a research project. By familiarizing themselves with this cloud based tool, students are able to easily work on, pass in, and share their work wherever they have internet access. This has helped many students learn approaches to organizing and storing information that will be helpful in the internet based world they are living in. It has been an incredibly powerful tool in allowing the teacher to keep up on how student work is progressing and deliver timely, effective, and sometimes remote feedback on their work. It has created a portfolio of work for their year in 8th grade. Google Apps has also been used to post homework, class notes, important documents, and extension assignments. In all the above ways, Google Apps has become an important component of daily learning and teaching.	Library

Lane Elementary School Technology Projects

Presenters Grades/Course/Subjects	Project Descriptions	Room Locations
Teacher: Linda Coviello Grades: 3, 4 and 5 Class: Library	**Library Class Bookworm Blog** - During Library class, students not only read books but also write their own book reviews based on different genres, research and independent reading they have completed on Ms. Coviello's Bookworm Blog. Students can read each other's reviews and also share what they have learned!	A 201D
Student: Devan Kaushi Teacher: Nicole Grimes Grade: 3 Subject: Multiple ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**iPads In the Classroom** - Students have used iPads to create and show their understanding in a variety of ways. During reading, they used Book Creator to create a poetry eBook. Students used the app Explain Everything in science to demonstrate their understanding of water cycles through the use of text, pictures and audio recordings. Students created an iMovie during math to demonstrate how they solved a mathematical word problem.	A 201D
Student: Dominic Cogliano Teacher: Jane Mosier Grade: 5 Subject: Science ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Online Personal Dictionary** - This Magnets and Motors dictionary was created by a student to demonstrate his understanding of terminology on magnets and motors studied within a science unit. The student found definitions for important words, used them in sentences and found pictures or created videos to illustrate the ideas. He created the videos on an iPad and then moved them into a Google Presentation on Google Drive.	A 201D
Students: Sharon Lee and Ittai Weisman Teacher: Eugenie Armangua Grade: 4 Subjects: Interdisciplinary (Science, Math, Engineering, Finance)	**Google SketchUp: 3D Modeling** - This project had three tiers. First students learned about math arrays, and how they are used in the real world, including how architects use them. A professional architect was invited to the classroom to teach students about how designs are made and what factors need to be considered when designing buildings. Next their task was to create a parking garage after thinking about factors, such as cost of materials and traffic flow. Finally students recreated their sketches using Google SketchUp, which is a 3D modeling program.	A 201D

Students: Jishan Shaikh and Rachel Davis Teacher: Joshua Myler Grade: 4th Subject: Math ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Educreations** - Throughout the year, students have been using Educreations, an iPad app and web-based program, to record themselves explaining how to use various strategies to solve math problems. They practice communicating clearly and developing an understanding of universal algorithms. Other students can then refer to these short video explanations to review or reinforce their own strategies.	A 213
Student: Sydney Cogliano Teacher: Audrey Ferguson Grade: 3 Subject: Social Studies	**Google Tour Builder** - Using Google Tour Builder, Mrs. Ferguson's class recreated the journey the Pilgrims took to the New World. This was the culminating activity after the classes' visit to Plimoth Plantation.	A 213
Student: Shirley Sun Teacher: Katie Weinstein Grade: 3 Subjects: Social Studies and Writing	**Creaza** - After a field trip to Plimoth Plantation, students used Creaza, an online comic strip tool, to display their understanding of the Pilgrims' trip to the New World.	A 214
Students: Sophia Gitlin and James Brosgol Teacher: Molly Maguire Grade: 5 Subjects: Multiple ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Evernote: Digital Portfolios** - Students have worked with Evernote on the iPads this year to create personal digital portfolios to represent their learning across the curriculum. This project has made it possible for students to document and reflect on their learning in a variety of ways, including through written assignments, pictures, videos, audio recordings, and personal reflections.	Library

Students: Theo Knox and Jasper Paez Administrator: Rob Ackerman Grade: 5 Subject: Interdisciplinary - Coding and Programming	**Programming With Scratch** - Coding, the language of the Internet, is used to program computers. The ability to code is becoming increasingly important in the 21 century. Students were asked to create a functional game using the coding skills that they had learned through this intuitive program. Students have to be able to use their math, communication, and critical thinking skills to come up with ways code their "Sprite" properly.	Library
Students: Theo Knox and Jasper Paez Administrator: Rob Ackerman Grade: 5 Subject: Interdisciplinary – Coding and Programming	**Understanding Electrical Circuits With Makey Makey** - Combined with coding, students can create keyboards out of virtually anything after applying some basic understandings of computer circuits and electricity. Students will be demonstrating how a computer receives commands through use of electric boards, electricity and even fruit!	Library

Davis Elementary School Technology Projects

Presenters Grades/Course/Subjects	Project Descriptions	Room Locations
Students: Word Clouds - Ari Dashevsky and Emma Dubrovskiy Digital How to Book- Elizabeth Campbell, Hannah Messinger and Bella Savoie Teacher: Susan Nocera Grade: 1 Subjects: Reading and Writing	**Word Clouds and Book Creation** - "Word Clouds" have been used to help children "collect" words from a story that support the various text features we are discussing. Students will show how we used this program to create graphically pleasing posters of words that support our understanding of the setting in a story. We use this same method to practice new vocabulary and to highlight character traits. As part of a procedural writing unit, students created a "How To Book" that shows the steps you would need to follow to wrap a present. They used a combination of hand printing and word processing to add text to their book and a digital camera to photograph the steps. The finished product is a wonderfully well thought out masterpiece!	A 201D
Student: Evan Kelly Teacher: Kim Marino Grade: 2 Subjects: Reading and Writing	**Book Reviews → Tagxedo and QR Codes** - This was an interdisciplinary project completed this winter in social studies and language arts. Students read and studied the biographies of various people who have made a difference in our world. They researched a famous person and used the information they learned to create an opinion writing piece. Students then transferred their written pieces into a word cloud and took pictures of their portrait drawings using the iPads. Finally, students shared their completed projects with each other by scanning QR codes with the iPad to read each other's projects on the class web site.	A 213
Students: Samantha Nappi Maya Pillai and Emily Zhu Teacher: Sema Arakelian Grade: 2 Subjects: Reading and Writing	**Book Reviews, Word Clouds and QR Codes** - For this project, the children used the writing process to write and publish book reviews. This included prewriting, drafting, revising, and publishing. The class read book reviews written by other young children and identified elements that we thought were important to this process. The students then selected a book of their own to review. Their final book reviews were written with the aid of AlphaSmart keyboards, uploaded to a word document, and stored in a QR code. The students also created a Word Cloud document which was in a shape relevant to key events in the book and included descriptive words and phrases that were reflective of each story's theme.	A 213

Student: Ruby Brennan Teacher: Amie Cormie Grade: 1 Subjects: Multiple	**Little Bird Tales: Penguin Unit** - Students accessed littlebirdtales.com to write, draw, and speak about the penguins they were studying.	A 214
Student: Ruby Brennan Teacher: Amie Cormie Grade: 1 Subject: Multiple ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Student-Centered Learning With SMART Boards** - Students use the SMART Board as a learning resource. Smart Exchange activities designed for the SMART Board can be used as a large interactive learning center helping students work together to solve different problems and learn new skills through cooperative activities.	A 214
Students: Andrew Lum, Laney Mead, Max Adam and Cassidy Schuman Teachers: Sarah Dorer and Edna Lee Grades: 2 and 4 Subject: Interdisciplinary ***This project was made possible thanks to the generous contribution of the Bedford Education Foundation.***	**Lego Robotics** - The WeDo Robotics program is a set of beginning robotics programming activities that was developed by Lego. It is an extension of the science units on Simple Machines and Force and Motion that are taught in 2nd and 4th grade. We begin with robotics programming in Grade 2 with students making two separate robots, which are The Dancing Birds and the Hungry Alligator. Students then learn to program the birds to "sing and dance" and the hungry alligator to "swallow the fish" two different ways. The robotics program is extended in 4th grade with students building and programming a Ferris Wheel. They learn to simulate a real Ferris Wheel by picking up passengers, accelerating the wheel, rotating for a set amount of time, decelerating, and finally stopping. This program has been a wonderful addition to our STEM curriculum in that it promotes critical thinking and problem-solving skills in a way that is accessible to young children.	Library
Student: Anderson Marino Teacher: Jeremy Royds Grade: K Subject: Library Class	**Neighborhood MapMachine** - Neighborhood MapMachine allows students to build their own computerized town. Students plan road systems, transportation, and community buildings, such as homes, stores, farms, police/fire, libraries, and schools. Neighborhood Map Machine complements the kindergarten community unit and Davis Town project.	Library

Students: Ada Cooperider and Akira Ung Teacher: Jeremy Royds Grade: 2 Subject: Library Class	**Toon Boom Animation** – Flip Boom Cartoon, an animation software package for elementary school students, introduces young animators to the process of creating cartoons and telling stories on the computer.	Library
Student: Madison Canzater-Miller Teacher: Jessica Hart Grade: 1 Subjects: Mathematics and Literacy	**Problem Solving Strategies** - As part of our Bridges in Mathematics program, students are continually solving and creating their own word problems. This not only develops students' understanding of story problem solving strategies, but also allows them to develop the mathematical language and reasoning necessary to understand how these problems work. In this project, students used the drawing and stamp features of the KidPix program to create a penguin story problem picture. The students dictated the question they had for their peers or typed it using the text box feature. Afterwards, students challenged their classmates to solve their problems using the strategies we learned about in class.	Library
Students: Whole Class Teacher: Kimberly Petersen Grade: 2 Subjects: Multiple	**iPad Stations and Blogging** - Students in Mrs. Petersen's class use the iPads for various learning activities. They use them to reinforce math facts, to create digital stories, and to create reflection blogs on Mrs. Petersen's web site. The iPads are used as one of the many learning center stations in the classroom where students rotate to different activities throughout the day.	Library