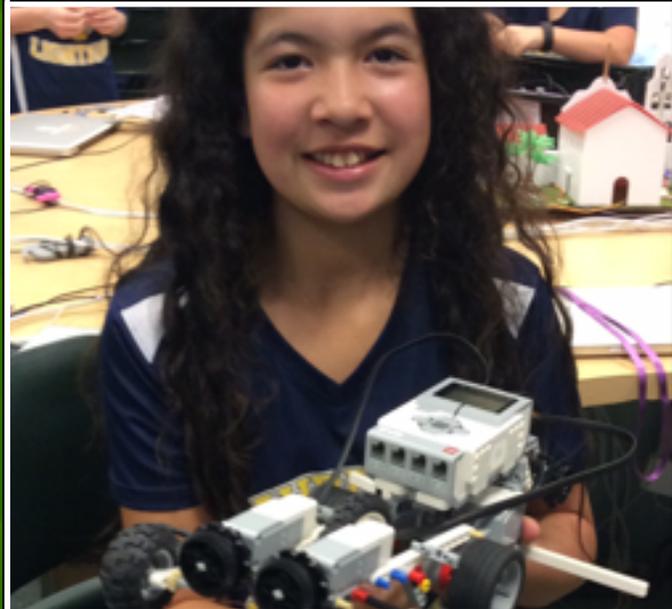


LAURENCE TECH BUZZ SPRING 2016



By Christine Eaves, Instructional Technology Coordinator

LEGO Building & Programming



Flipbookit STEAM Project



LEGO Robotics Showcase



MIT Scratch Programming

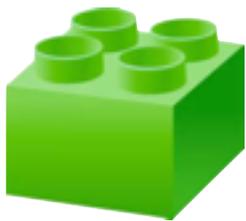


It's **SPRING** and the Tech Lab is Buzzing!

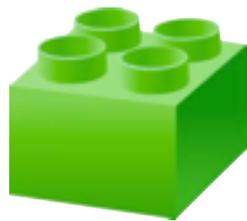


Thank you for taking time to read the Spring 2016 Tech Buzz! I hope you're all enjoying your Spring Break and getting ready to come back to school. This has been an exciting year in the Tech Lab and I'm thrilled to tell you about some of the great things kids have been accomplishing over the last few months. As always, I appreciate your feedback about the Tech Buzz. Also, if there are topics you'd like to suggest that I include, do let me know. If your child would like to contribute an article or review to the Tech Buzz, I'd LOVE to include their work. Please send any comments to me at christine@laurenceschool.com.

Christine Eaves, Instructional Technology Coordinator, Laurence School



LEGO SHOWCASE



As I reported in the Fall Tech Buzz, 5th graders were working hard building, blogging about, and programming their LEGO robots for our LEGO Showcase Day in February. Kids worked feverishly, right up to the last second, even taking kits home over the weekend, so that they could be as ready as possible for the big day. The students, their teachers, and I all travelled to Village School in Pacific Palisades to join the 5th graders at Village and another visiting school, Brawerman School. All the kids were in their groups and had brought their robots (mostly in pet carriers to keep them safe), any peripherals they needed to help their robot (disco balls, a ramp, etc, for example), and posters and scripts to help them as they presented. Every group had to get up in front of all the other kids, introduce themselves, talk about their robot, then demonstrate what it could do, with their fingers crossed that it would perform under pressure. As always happens at these kinds of events, a robot will work perfectly dozens of times prior to the showcase, then suddenly will acquire "robot anxiety" and do nothing. The kids had been prepared for this to potentially happen, and it was handled perfectly with humor and enthusiasm. Most of our robots worked really well and did exactly as expected. I can honestly say that every child present did their very best and represented our school and themselves beautifully. I was so proud of them. One of the most impressive LEGO robots we saw at the showcase, was a robot built by two boys from Brawerman school that actually could solve a Rubik's Cube puzzle. Their robot had anxiety on it's first try and just about crushed those boys' spirits by not working. We sympathized and applauded anyway and felt really sorry for them. Fortunately, they had a few minutes to go work on it behind the scenes and came back out and tried it again. We all watched silently, as the robot spun and swiveled and turned the Rubik's Cube before our very eyes. Slowly, we started to see it working the puzzle out and with gasps of astonishment from all around the room, it solved the puzzle and we all cheered and whooped it up for their success. The kids have moved on to their Graphic Design course and are busy designing gorgeous, creative magazines using their newfound skills. Come and see them in their classrooms at Open House!



A Lego team dancing with their robot.



5th Graders and Ms. Eaves after the showcase at Village School

MINECRAFT



I've never seen students so eager to come to class and so reluctant to leave as I have in 6th Grade Minecraft Edu class this year. We started out by programming turtles in ComputerCraft, a variation of Minecraft that allows players to write code that allows them to control turtles (or small computers that look like turtles) in a Minecraft environment. It may feel like "play", but it's hard work. It takes patience, planning, problem-solving, and quick thinking to accomplish all the puzzles and obstacles they had to solve or pass before they could go on to the next level.

Once we finished that project, we moved into our Urban Planning project, in which all the students were spawned in the same map and had to explore the territory, find a place to build a town, and get to work. Their goal was to construct a functioning society in which all members could live, prosper, and be successful. They built a Town Hall, in which they had weekly, virtual meetings to discuss the progress and problems they were encountering, and to decide on laws and punishments for breaking the laws. It was pretty exciting to see them working together to plan their town. They decided who would build each necessary building, who would run the farms, the shops, the school, the hospital, the hotel, the armory, and all the other buildings and meeting places in the world. They built homes and helped each other with supplies and services. While a group of girls built the underground subway, other kids would volunteer to protect them from monsters while they worked. Other kids might be mining for supplies to contribute to the subway project. All students received a paycheck (in the form of emeralds) each week, and received additional pay for work that directly helped the community.

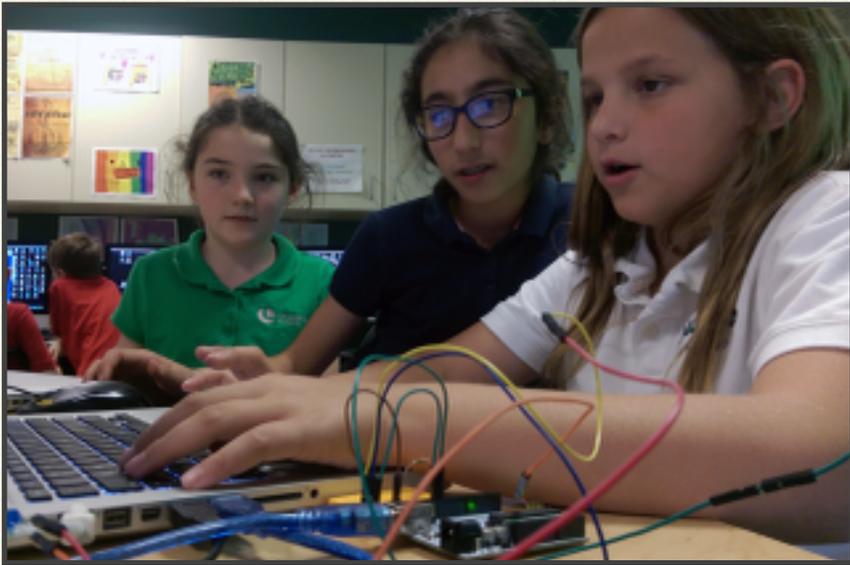
I was really excited to see the high level of communication between the kids during this project. Though sometimes it sounded like a lot of desperate shouting across the room "Help! I'm running out of food and about to die of hunger!", it mostly sounded like polite, direct conversation about plans and progress. We developed the laws of our land that would help with fairness, and neighborly behavior, but just like the real world, not everyone followed those laws all the time. It was pretty impressive to see the kids work these problems out successfully, and still walk out of the room as good friends. I also was so pleased to see how giving and generous the kids were to each other and to me, as I played alongside them. Kids often worked in groups to build homes and run businesses and they generally worked really positively toward their goals. It was so nice to see kids helping each other out, sharing their resources, and generously offering to help on projects that weren't their own. I think that this project, not only helped build technology skills, it really helped the kids learn some real world, adult lessons about living in and contributing to a community.

We've been using Minecraft Edu for Minecraft class, but I'm eagerly awaiting the launch of Minecraft Education Edition, <http://education.minecraft.net/>, which should offer some fantastic improvements to my courses. Stay tuned to get more info as it's released.

6th Graders will begin their Digital Photography Course after Spring Break. Their work will be featured in the lab and in the next Tech Buzz.



4th Grade Missions

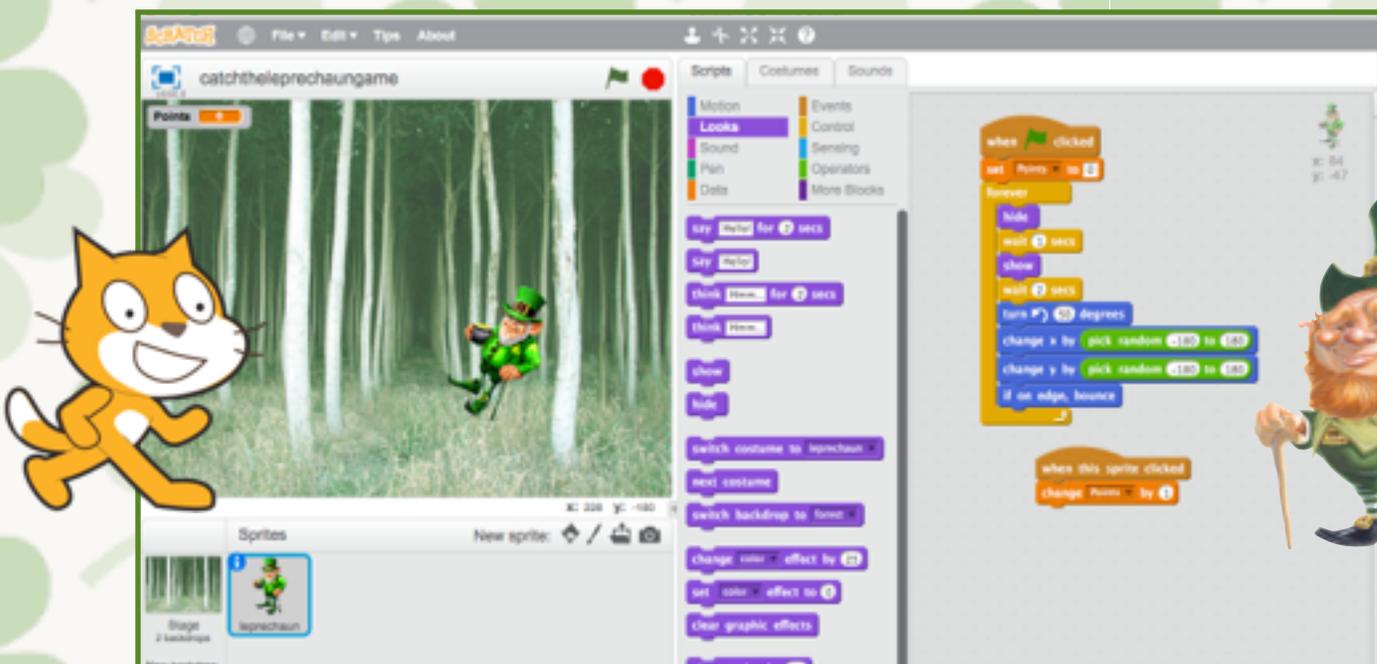


4th Grade girls programming their Arduino board.

The 4th Graders have continued working on their California Missions projects and are now on to the circuitry and programming. As a reminder, the kids are working in small groups, studying one of the 21 California Missions. They examined the original floor plans found on the National Archives, and redesigned their mission in 3D using Google SketchUp. They also collected images and information to create an interactive presentation using Hyperstudio. In Art class, they've been building actual models of their missions, while simultaneously getting instruction in the lab on the Arduino, circuitry and programming. Our next and last step, is to connect the wiring to the model and the computer, so that the Hyperstudio presentation actually controls the model through the Arduino board. For example, you might click on a button in the Hyperstudio project that says BELL TOWER. When you click it, a light will turn on on the bell tower in the model. A video of the kids talking about the bell tower will automatically begin to play when the light turns on. Pretty cool, huh? Stop by the lab and check these out at Open House. Look at those girls programming their Arduino board!

3rd Grade Coding

3rd Graders have been working on their Whack-a-Potato projects and we're nearly done! Using MIT's Scratch, the kids have been learning all the basics of coding and getting prepared to execute their complex Whack-A-Potato projects soon. Kids will actually need to bring in a potato, which is conductive, in order to play their games with the MaKey MaKey circuit boards when we're finished coding. In March, we took a quick detour from our Whack-a-Potato projects and worked on a "Catch The Leprechaun" game, which actually, isn't much different than Whack-a-Potato. The kids did a great job figuring out how to make their leprechauns appear and disappear randomly, and earn the player points if he or she could click on the leprechaun before it would disappear too quickly. It was lots of fun. Stay tuned for the finished Whack-a-Potato projects, which should be available for you to play at Open House.



2ND GRADE JAPAN STUDIES

2nd Grade Japan studies are integrated into the Technology course through a variety of projects. We made beautiful Japanese and Zen Garden Haiku projects using Pixie4, and even studied Japanese Anime and created our own animations in the style of anime using the Wacom tablets and styli.

Next, 2nd graders will be learning a powerful iPad app called Explain Everything. They'll learn the basics, then start working on projects about the solar system!



Anime character drawn by Jocie



Drawing with the tablet



Japanese Garden Haiku by Kalliane

CO DE 1ST GRADE CODERS!

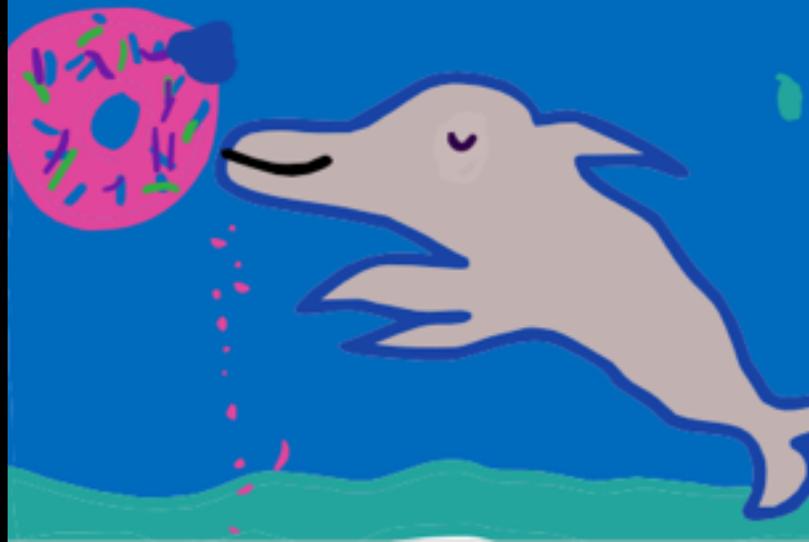
1st Graders have officially started to code on the computers using a website called code.org. The kids really enjoyed their first lesson before Spring Break and will be working with code.org for a few more weeks. If your child would like to continue with his or her progress at home, please go to the link below and have your child log in with the passcode issued to them during class.

<https://studio.code.org/sections/mmwhdz>

1st graders recently finished making Pixie pictures of China as well. Calvin did a great job with his China picture.



We also made "circular story" animations in 1st grade. Here is one frame from Mae's "If You Give a Dolphin a Donut" animation.



flipbookit™

After-School STEAM Elective

Mrs. Lu and I offered a Flipbookit elective last trimester and are hoping to offer this exciting elective again next year. Flipbookits are a modern take on the old flip books we played with as kids. In this class, we build our own Flipbookit box, take pictures or video, or even draw our own animations, then print them onto cards that get inserted into the Flipbookit axle. We wire it up with a servo motor and battery/switch so that it can be turned on and off so that it will automatically flip through the images. Go to our Laurence Facebook or Instagram account to see videos of Sam and Elisabeth's Flipbookit projects (pictured here). They were fantastic! Sam animated a PacMan game and we created a vintage looking arcade base for it using the 3D printer! Wow! Elisabeth covered her Flipbookit in fur, 3D printed a dog, and made a bowl and bone out of clay to house her animation of her dog jumping through a hoop. Both of these projects were featured on Flipbookit's Instagram account as well! What an honor! We hope to have a lot of kids sign up for this class next year so keep it on your radar. <http://flipbookit.com/>



Kindergarten!

In Kindergarten this trimester, we've been practicing using our Wacom tablet and styli to make digital drawings. We made beautiful drawings for our Grand Buddies, drew amazing pictures of Abraham Lincoln, and just finished drawing our country's Liberty Bell. The kindergarten students are doing an incredible job learning this tool and seem to really enjoy coming to the lab to work.



Grand Buddies' Day by Leah



Liberty Bell by Oliver

Abe Lincoln by Camilla

Student Articles



Enjoy these articles written by students! If you're a student, and would like to write an article or review for the Laurence Tech Buzz, please talk to Ms. Eaves and email your article to christine@laurenceschool.com. Thanks for your contribution!

MONUMENT VALLEY

BY ZOEY
6TH GRADE



Come and join Ida on an adventure of a lifetime as she travels through different worlds in the iOS and Android app by ustwo called Monument Valley. This game won Apple's iPad Game of the Year Award in 2014 among many others. You and Ida will complete many different puzzles and challenges to try and enter the next universe. Funky landscapes, weird angles, and beautiful scenery invite you to come and explore the ruins of the forgotten monuments. With many obstacles and a race against enemies this game has you hooked in for hours. What will you discover?

This is an app that you won't want to miss! The designers at ustwo have done an excellent job with the characters as well as an outstanding job with the scenery. This game will always keep you hungry for more. Enjoy stunning puzzles and challenges that will keep your brain ticking for hours. I have gotten extremely close with this game and I would say that most of my grade has too. This game represents that there is no limit to your imagination. I would rate the app five out of five stars and I'm sure you will too once you play it. But be warned, this game has you thinking in a different perspective!

My name is Charlie, and I'm a 3rd grader. One of my favorite things to do in tech is Animation-ish. We don't use mice, we use Wacom tablets. Wacom tablets are tablets that have pens and you write with them. Animation-ish is where you draw a picture and make it move and animate. I love this program because I like making things real and move. This program is educational because it gets kids' minds moving and not only me, but a lot of people like this game because it's super fun. In this game, there are three levels: Wiggledoodle-ish (easy), Flipbook-ish (intermediate), and Advanced-ish (advanced). Kindergarten and 1st graders use the Wiggledoodle-ish and Flipbook-ish levels. 2nd and 3rd use Flipbook-ish all the time. 4th and up can use Advanced-ish, but it's pretty complex.



