Cranbrook Robotics

Summer Camp Newsletter

Week One 6/21 to 6/25

Dear Parents,

We were thrilled to welcome an extraordinary group of students for our first week of robotics summer camp. We know that you have a lot of camp choices. We want to thank you for choosing to spend your summer with us, having fun and building skills for our rapidly changing future. Campers amazed us with their curiosity, creativity and perseverance. They followed detailed instructions to build a robot to specific specifications, then had an opportunity to put their imagination to work making a robot of their own design. Our supportive instructors inspired designs, helped find tiny parts and built a relationship with your student. The 4th to 7th grade Vex IQ robotic students had a chance to visit the natatorium for a much-needed swim on Tuesday, followed by the 1st grade Lego WeDo and 2nd to 3rd grade Boost groups on Wednesday. While we are unfortunately not able to invite parents into our buildings this summer for our traditional Show and Tell on Friday afternoons, we have included a variety of pictures and stories about our thrilling week in this newsletter.

Gratefully,
The Robotics Summer Camp Team

Want to Purchase the Kits We Use?

Lego WeDo 2.0
https://education.lego.com/en-us/products/lego-education-wedo-2-0-core-set/45300

Lego Boost Creative Toolbox
https://shop.lego.com/en-US/product/BOOST-Creative-Toolbox-17101

Vex IQ Super Kit
https://www.vexrobotics.com/228-2500.html

4th to 7th Vex IQ

Our Vex IQ instructors, Mr. Elmer, Mr. Daniel and Ms. Aishwarya have all been looking forward to starting a great week of camp! All of the campers made this week exceptional, as everyone learned how to construct and program their robots for the Vex IQ competition. While a few students came in with prior knowledge of Vex IQ robots, most were newly introduced and each individual rapidly grew their understanding. This season's competition is called “Pitching In”. The object of the game is to attain the highest score by scoring balls in goals, clearing starting corrals and by hanging the robot at the end of the match. Campers could build a robot from instructions, called “Fling” or create their own design. Robots were programmed using a graphic software called Robot Mesh Studio. Please look for an email this weekend with a link to a YouTube video that contains some video of the tourney on the last day.


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Isabella followed the instructions exactly and was the first one to get a functioning catapult that could shoot balls over the wall and into the high goal.

Julia built a robot to hang from the highest rod on the field, which gives the most points. She tried a hook that would raise with linear rack gears, latch onto the rod, and then lift the robot up, but found that a rotating arm worked better.

Erik decided to go with his own base design, then adding a front claw and eventually an arm that could hang.

Ahren went through a few versions of his own base design before getting one that he liked. He also coded an autonomous "self-driving" mode.

Alex went through many versions ("Marks") of his robot before getting to one that he liked for the tournament. He used a 60T gear to create a "saw" which spurred a trend.

Not to be outdone, **Gavin** put two saws on his robot and programmed them, but later took them off because of other priorities, such as ball collecting. He learned how to activate blinking LED lights on the robot with the touch of a button.

Tyler had many creative ideas and based his robot design around a base with a mini robot trailer. He added touch LEDs for some bling, starting another trend.

Ishan built a catapult robot and with some hard work was able to get it to throw balls. He worked to create special controls for his fling.

Sam and Evie worked in tandem, carefully collecting parts and assembling their robots. They both modified the front end of their robots to better capture and corral the balls.

Liani got her robot base working quickly, then added an arm for hanging for more points.

Neil carefully assembled his version of Fling, paying attention to the important details.

Simon built a robot of his own design with omni wheels for faster turning. Simon topped off his robot with a flashing LED.

Michael quickly and accurately followed the instructions and built a catapult robot. During testing, he decided to add "armor" protection.

Will investigated a three-wheel concept with LEDs. He programmed and experimented with one joystick driver control.

Brianna and Skylar each built robot bases and spent a lot of time on the practice field working on different ideas to score.

Nyla built the "Fling" base, then added a two-motor arm to enable the robot to easily hang.

Jacob demonstrated his own personal style with hats and airplane-themed shirts each day. Jacob's robot also had style; he also worked to get it to hang. He even made an airplane out of Vex IQ parts as a side project.

The campers will finish the week by participating in a Vex IQ Pitching In tournament, where they can demonstrate their robots in official teamwork challenge rounds and skills runs.

2nd to 3rd Lego Boost

Lego Boost Creative Toolbox guides campers through the building and coding of fun interactive robotics. Campers were particularly creative with some project ideas. They were also energetic and excited whenever we went outside for a snack, to play ball or on a hike around campus. We also finished off the week with an optional battlebot tournament that combined the kids' love for competition with their natural talent at robotics. The instructors this week were Mr. Ben and Mr. Avaneesh.

Hadi

Hadi was a great camper. He always was attentive to our instructions and really made use of his time for building robotics. He started working on one of the blueprints we gave him, but soon found more interesting designs that appealed to him. We look forward to having him back next week.

Henry M

Henry was very knowledgeable about our Lego Boost kits and he used that to his advantage. He was very quick in making our tutorial bot and after he finished he even helped others. He also made very innovative designs for our battlebot competition. All in all, he was an energetic student to have and he definitely had a lot of fun this week.

Henry V

Henry was a great student to have, as he is always attentive and listening to others. He worked on the boost robot this week and had a lot of fun building it. He also enjoyed his time running around during our snack and lunch breaks. We look forward to having him back next week.

Jayden

Jayden spent the week building his tank bot, an experience that he enjoyed. He has a great work ethic and always wanted to spend as much time as possible to work on his robot. He also showed great willingness to help others with their robots. During our time outside for breaks, he also enjoyed running around and looking at nature.

Kevin

Kevin was another great camper because of his ability to follow instructions and have fun in the process. He first started building a boost cat bot, but after an absence and a change of heart, he spent the rest of his week building and creating a robot for our battlebot competition. He definitely enjoyed every second building and programming his robots, and he learned a lot from the different robots made by others which he observed. We look forward to having him back next week.

Louis

Louis was very interested in robots, whether it was ones shown online, from other kids in his class or his own. He first worked on the boost tank bot, but soon wanted to try and implement his own design for our battlebot competition. Over the past few days, he has built several variations of his design and has experimented with each version. Overall, he really showed creativity and ingenuity at this camp.

Luka

Luka was fun to have in this camp. He was always positive and he enjoyed everything we did, whether it was swimming, exploring campus or building robots. He loved building his battlebot robot and was passionate about seeing others come up with different designs. He also learned a lot from his own failures when making robots, and he definitely improved as a roboticist this week. We look forward to having him back next week.

Luke

Luke really showed his perseverance at this camp. The blueprints we gave him never really connected with him, so we encouraged him to make his own design. After looking at other designs of battlebots, he spent two days crafting a solid robot that would increase his chance of winning. He was a joy to have and we feel he has really grown this week.

Lyle

Lyle always is passionate about robotics and really enjoyed himself during this camp. From day one, he wanted to finish his boost robot as quickly as possible and make it the best he possibly can. Working on his robot every day was never tiring for him and he always wanted extra time to perfect his design. We feel he had a great time building robots this week.

Parker

Parker was very experienced with making robots and it clearly showed at this camp. He was the second-fastest to finish his boost robot, which demonstrates his ability to easily follow instructions. He also took a very creative approach to our battlebot competition and tried a couple of designs before settling on one that is quite unique from the rest. All in all, he grew as a roboticist and as a person at this camp and had a lot of fun in the process.

Aaryan

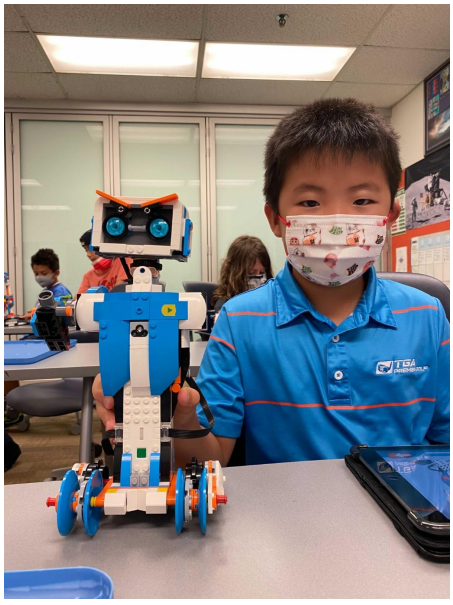
Aaryan spent the week diligently building his bulldozer, which he learned to both program and control manually. He is a hard worker, and even after he had to redo a bit of his project he still managed to complete it and had time left to modify it for the battlebots competition today. I look forward to having Aaryan again next week.

Bramwell

This week, Bram chose the cat as his boost project. Although he only partially completed it before moving onto a battlebot, where Bram truly shines is programming. He was able to write a code to manually drive the robots and was eager to share and help classmates do the same. I look forward to having him next week!

Dominic

Dominic spent this week building the manufacturing plant as his project. He is a hard worker and is always ready to get right back to work whenever we come in from break. After completing his first project, he went on to build creatively and program his robot for driver control. He was great to have in class this week.



Haruto

This week, Haruto chose the boost robot as his project. Although he is quiet, Haruto is an excellent student and not afraid to ask for help when needed. Even though he would rather be inside working than outside playing during snack time, he has made new friends and is incredibly nice. I look forward to having him next week!

Henry

This week, Henry chose the manufacturing plant as his boost project. Despite the increased difficulty of this build, he was able to complete it quickly and move on to programming it with skill. He was also able to build an entirely new robot for the battlebot tournament this afternoon. I look forward to having him again next week.

Jonas

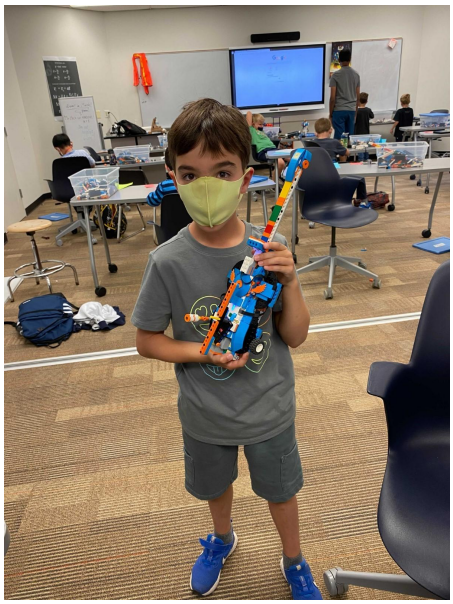
This week was about perseverance for Jonas. After he made a mistake building his boost project, he decided to completely restart with a more creative approach. He has made a unique robot that looks like nothing I've ever seen before. I look forward to having him again next week.

Julian

Julian is a very enthusiastic and energetic student. He was the first to complete his project in class (a guitar) and spent all of snack and lunchtime running around at top speed. He seems very excited to compete in Friday's battlebot tournament!

Noah

This week, Noah chose the manufacturing plant as his project for the week. This project is notoriously difficult to code, yet Noah was able to complete it in just a few days. Although he chose to take the more creative route and not compete in the battlebot tournament, he is always diligently working or helping out his classmates with their projects. He is wonderful to have in class.

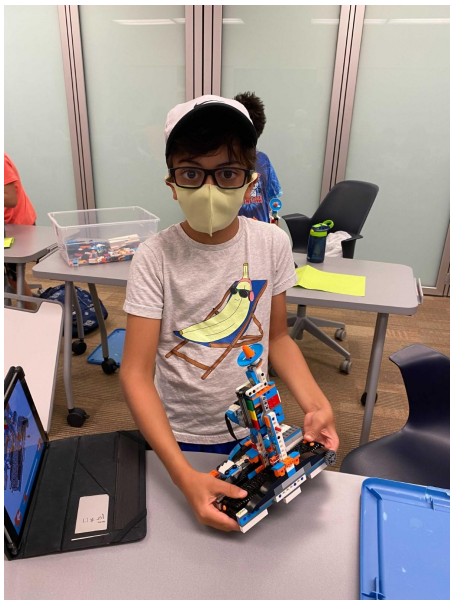


Nolan

Nolan chose a guitar as his lego boost project for this week. He is a hard worker and was one of the first to finish his project. In addition to giving it his all in the classroom, Nolan is also very excited whenever we go outside for a hike or lunch.

Evan

Just like his brother, Evan is very excited and energetic every single day. From playing during snack to discovering hidden build instructions in the lego boost app, he always finds new and innovative ways to spend his time at camp.



Oliver

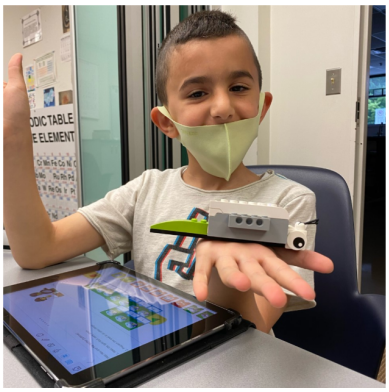
This week, Oliver chose the manufacturing plant as his boost project. Despite the increased difficulty of this build, he was able to complete it quickly and move on to programming it with skill. Even though he missed a day, Oliver was able to persevere and catch up quickly with his classmates.

Santiago

Santiago chose to spend the first part of the week building the boost robot. He is very skilled and was one of a small number of students to fully complete this difficult build. Santiago is always fully engaged and a good listener in class.

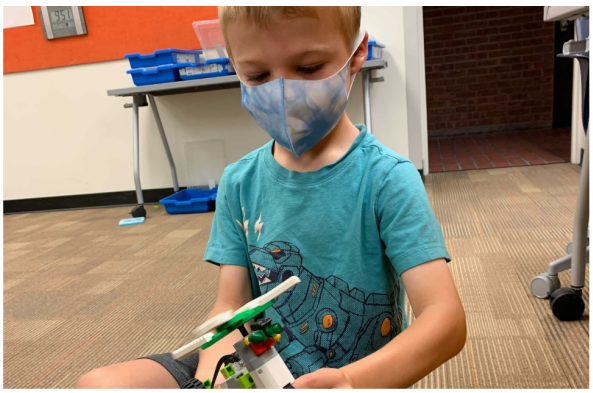
1st WeDo

Here at WeDo, we cannot believe the first week of camp is already over. Instructors Miss Emma, Miss Lily and Mr. Ian had a great time this week teaching your kids all about the beginnings of robotics using the Lego WeDo kit. Students followed set build guides and then started to explore and see what they could build on their own.










On **Monday** all of the campers completed “Milo” rover builds as an introductory project to get them used to WeDo. Ace worked particularly hard on his version to improve it. He was constantly curious about the lego's limitations.

Tuesday the students started to explore the other projects they could build.
Luca worked on an expanded windmill. He innovated to put more weight on the outside to cause it to spin faster. Caitlin built an ice castle as a background for more of her robots.

Wednesday our campers had fun splashing around in the natatorium, Victor finished his helicopter build with an intake system to rescue a giant panda from tiny houses and Bianca built a beach scene around her windmill. Greyson discovered a recording feature on his iPad and recorded his voice and many more sounds to innovate for his robot.

Thursday Connor and George worked together to build a racecar and then got to race multiple times with Bianca as a judge. Meanwhile, Miles worked on his propeller car that had flashing lights and looked like it could move in the water.

Finally, **Friday** was our last day of camp. The campers continued to show exceptional creativity as they have all throughout camp.