Cranbrook Robotics
Summer Camp Newsletter

Week Two 6/28 to 7/2

Dear Parents,

We were excited to welcome new faces to our second week and welcome those new to our robotics camp. We are thrilled that many campers have chosen to spend multiple weeks at our camps. It is both a testament to their willingness to pursue robotics and our excellent instructors. Both new and returning campers amazed us with their motivation, energy and imagination. New campers followed detailed instructions to build a robot to specific specifications, then had an opportunity to put their creativity to work making a robot of their own design. Returning campers had an opportunity to perfect their robots and dream up designs all their own. 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. When weather permitted, campers had an opportunity to hike a small part of our beautiful 319 acre campus. 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

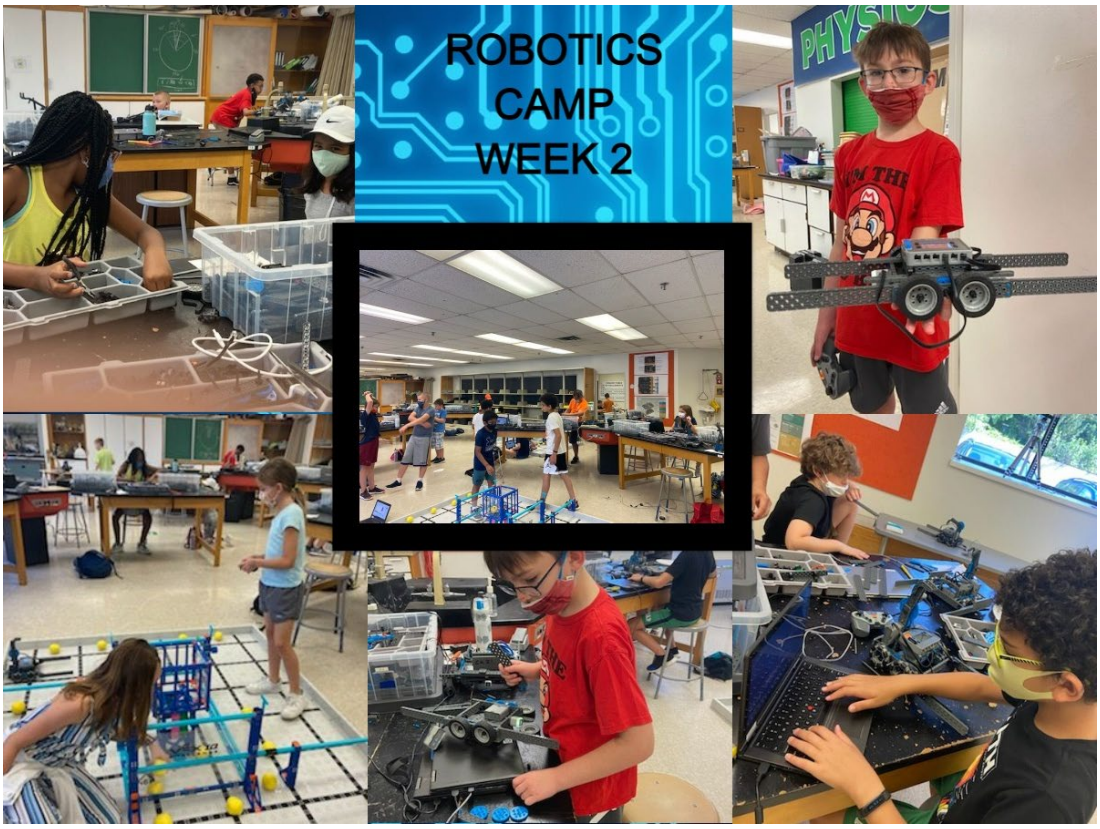
4th to 7th Vex IQ

Camp Summary

Vex IQ

Our Vex IQ instructors, Mr. Elmer, Mr. Daniel, and Ms. Aishwarya have been looking forward to 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 at the end of the match. Campers could build a robot from instructions, called “Fling”, a new design called “Campbot” or create their own design. Robots were programmed using a graphic software called Robot Mesh Studio.


ROBOTICS
CAMP
WEEK 2


ROBOTICS
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Robotics
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Week 2

THE VEX IQ ROBOTS!!!


PERIODIC TABLE
OF THE ELEMENTS


Robotics Week 2
Snack Time
and
Hike Time

Isabella decided to try the new Campbot design and quickly got it together. She made a longer scoop for more ball capacity and spent a lot of time on the practice field perfecting her strategy. She and Milly impressed us with their increasing scores.

Alex tried different ideas, including one with a 4 motor base. He created special code for driver control and autonomous modes.

Erik came up with his own design, which was low and wide. He added an arm that could do a low hang. He spent hours trying to improve his autonomous program.

Guerin built a robot which could push balls and hang. He then tried different combinations of rubber tired wheels and omni wheels to find the best combination. He also modified the arm to do a reverse hang.

Neil adopted an arm to his robot which could do a high hang, then programmed it to hang autonomously. His strategy proved to be helpful in the teamwork competitions.

Ishan built a robot that prioritized pushing balls and doing a low hang. He spent a lot of time working on his strategy and improving his skills score, always wanting to do better than his previous score.

Simon was very helpful with other campers, helping them program LEDs. He also decorated the competition field with stylish gears and links. He built a “mini-bot” for the competition.

Michael built a big and powerful robot, then added gears to improve its ability to hang in both driver mode and autonomously. He worked a lot on his driving skills; we’re looking forward to seeing what he will do next week!

Emerson built a “Campbot” robot, then added reinforced sides to keep it together during matches. He tried different ways to code the arm movement until the robot could hang properly.

Seif programmed his robot to get all of the balls out of the corral and hang. He also made a program to score balls and hang autonomously. He and Ishan worked a lot on their teamwork score.

Arayana customized her version of “Campbot” with a purple LED. She also programmed it to hang autonomously. She was always willing to lend a helping hand!

Milanya tried combining a catapult from “Fling” with the base of “Campbot”, and wound up replacing the catapult with a pivoting arm. She and Isabella worked to maximize their teamwork score.

Memphis came up with a ball intake that could get several balls at a time, then added an arm for hanging. She worked hard to get her autonomous program working and maximize her skills score.

Julien built a robot with a chain drive and LEDs that looked like tail lights. He then added an arm for hanging. Julien also tried different joystick modes before deciding on one he liked.

Jack built a “campbot” and got it working well, even though his time at camp was shortened.

Will explored different concepts. He made a Vex IQ eagle and also a Vex IQ dragon with moving wings and red eyes. He increased the speed of his competition robot using sprockets and chains, and helped others change their controls to “arcade’ mode.

Nyla revised her robot to make it easier to drive and easier to hang. She also built attractive dollhouse sized furniture out of Vex IQ parts. She and Ms. Aishwarya built a unique ball launcher.

Jacob impressed the instructors with his growing top hat collection. He showed that he could also balance a lunch bag on top of all of the hats! He was also very helpful when other campers needed a helping hand.

Lukas built a robot that could push balls and hang, then programmed it to work like his game controller. He added LEDs and programmed them to do different things depending on inputs from the controller. He and Will worked together to improve his robot.

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 Graders
Lego Boost

Lego Boost Creative Toolbox guides campers through the building and coding of fun, interactive robotics. This week's 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. This week's instructors were Mr. Ben, Mr. Avaneesh, and Mr. Marcel.

Boost 2:

Kevin- Kevin really showed why he is one of the best builders at camp this week, as he finished the lego boost robot in record time and already started making cool add-ons like sunglasses for his robot. He is always very passionate about robotics, and that is just one of a plethora of reasons why he is such a great camper.

Hadi- This week's camp was about perseverance for Hadi. He had to restart his robot multiple times due to parts being broken and other obstacles, but he managed to finish the week with a solid well-designed robot. We hope that he continues this forward progress into next week.

Jayden- Jayden explored the creative aspect of robotics this week, as he already built a tank robot last week. He implemented numerous key elements that would set his robot above the rest in the battlebot competition. We look forward to having him back next week.

Jack- Jack was a great camper to have this week. He was always attentive and kind to others, and used his knowledge about the lego boost kits, which he has done before, to help others. He also is a quick learner and was very self-sufficient when building this week.

Henry G- Henry was another roboticist who was really passionate about implementing creative designs. He definitely had a lot of past knowledge about robots, and he used them well when he helped others in our battlebot competition. His cat robot was also built great. All in all, he was a great camper to have.

Zachary- Zachary was another camper who took the more creative aspect to building robots in this camp, as he mainly focused on a battlebot to build for most of camp. After trialing a few designs, he settled on one that combined parts of other robots that he had seen work effectively. He was great to have in class this week.

Max- Although Max missed the first day of the camp due to COVID protocols, he rebounded nicely and built not one but two robots during this camp: the tiger robot and the lego boost robot. He always wanted to build and really took his time perfecting his robots. He was a joy to have this week.

Luka- Luka really showed signs of improvement from last week in terms of making complicated robots. He worked on the lego boost robot this week, a much harder robot to build than last week's design, and he even managed to finish it in time for our battlebot competition. We look forward to having him again next week.

Henry V- Henry explored the more creative aspect of building a robot this week, and he took it upon himself to make a robot that could win our battlebot competition on friday. He is a joy to have since he is always attentive and respectful, and we look forward to seeing him next week.

Madeleine- Madeleine was a great camper to have. She worked on the guitar robot this week, and she really enjoyed playing with it. She also programmed it using the lego boost app, and she really became proficient with the programming aspect of this camp. She was wonderful to have in class this week.

Here is a link to class photos:
https://photos.google.com/share/AF1QipMk5Dek3QmpUhywGNUes6oRKJmXzWL5IlpFxIrzMg18Ym_PuXiiyOb14VMckwvOhw?key=dXNady1lOVhvQ1Q5dElpSVc3ZXgzM0hORWVrN1VB

Boost 3:

Aaryan: Aaryan spent this week advancing past boost and into our new and more complex spike robot kit. Using this, he ventured into python programming and played around with the new more complicated sensors. Although he is about halfway through this project, he is demonstrating a willingness to learn programming well above his age level. I look forward to having him again next week.

Mia: Mia leapt out of the gate and was able to quickly build the assembly line, which is one of the most challenging projects to build and code. She was a hard worker, and after completing her first project she went straight into a second. Mia was also very kind to classmates and respectful in class.

Vincent: This week, Vincent chose a more creative route instead of sticking to one of the outlined projects. He worked with the lego boost HUB and motors to make creative builds throughout the week, and enjoyed battling robots with his classmates and hanging out with his cousin.

Nathan: Nathan chose the bulldozer as his boost project for the week. Although he wasn't able to fully complete the build, he had a great time working through it, taking breaks to admire the robots of others and help with their builds. He was also very energetic whenever we went outside for snack or recess.

Remi: This week, Remi decided to build the robot boost project. Despite having to restart because it fell off the table, Remi sped through the building process and finished in just 3 days. He is a very diligent worker and was already designing his own robot just a few minutes after completing the boost one with instructions. Remi was a pleasure to have in class this week.

Jonas: This week, Jonas continued to refine his bulldozer boost build. He spent many hours testing it, adding new features, and doing target practice with the small canon he attached to it. He is very excited to compete in today's Battlebots tournament, and I look forward to having him again next week.

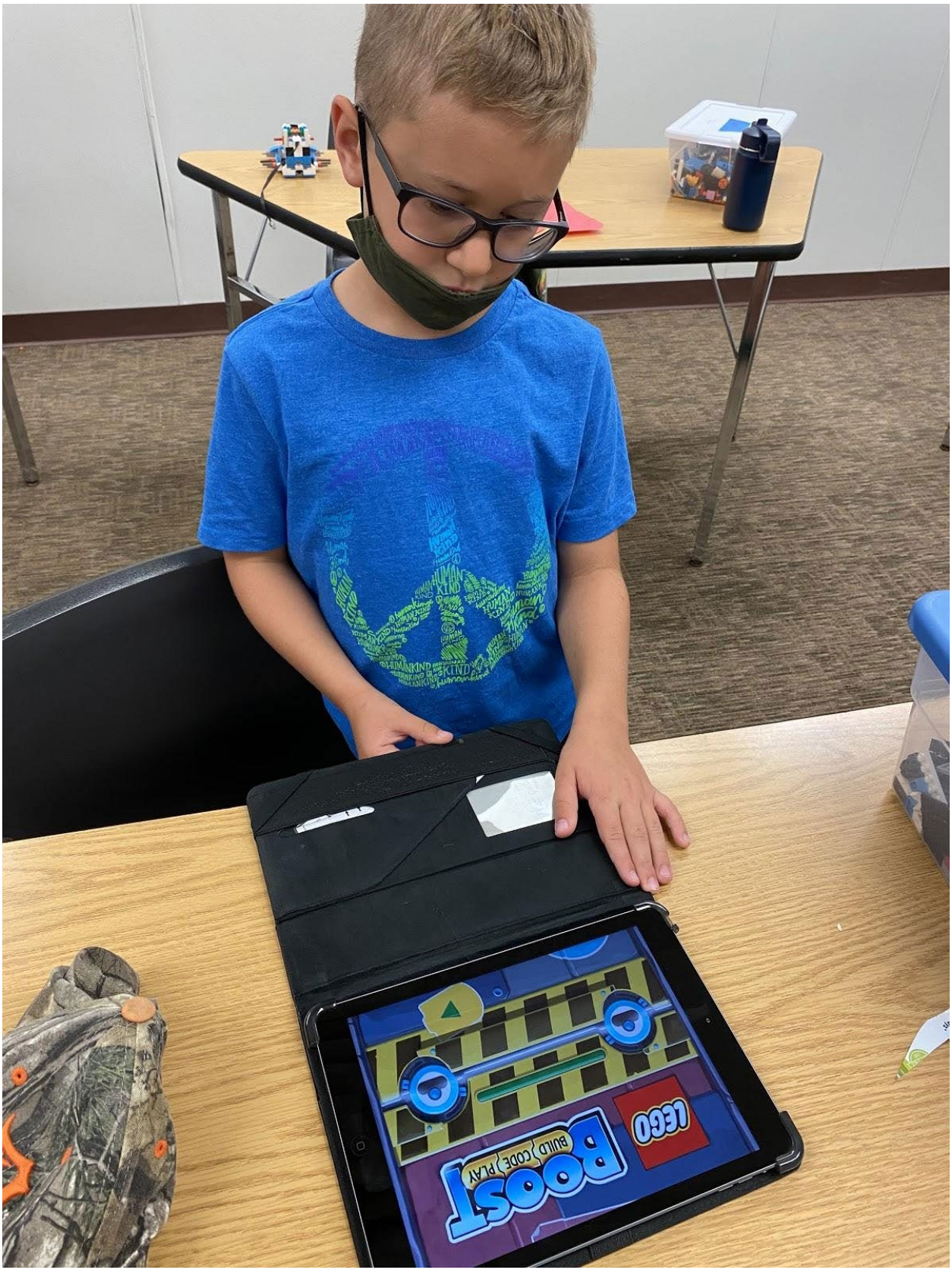
Henry: Henry continued to refine his bulldozer, adding new weapons to it like a plow and hammer in order to prepare for today's battlebots tournament. He has been a diligent worker, searching through the boost programming section for functions that will give him an advantage. He has been a pleasure to have in class for the past 2 weeks.

Kai: This week, Kai chose to take a more creative approach. He utilized the boost robot kit to make new designs and inventions, like the spinning top he made. He also loved battling robots with his classmates and even offered to help. It has been a pleasure to work with him this week.

Benjamin: Benjamin chose to build the robot as his project this week. Despite his day 1 absence, he was able to quickly complete the build and add additional functionality beyond the instructions, showcasing his design skills. Now, he has moved onto programming the robot, something he also shows proficiency in. Benjamin has been a pleasure to work with this week.

Haruto: Haruto explored a few different areas this week. First, he continued working on his boost battlebot and practiced battling with the other campers. He later moved onto our spike robot kit, which is for advanced students and includes higher level programing and functionality. Although he struggled with it this week, I'm confident that he will be able to fully utilize the new robot kit next week and build something amazing. I look forward to having him.

Bram: Bram, still ahead of the pack, has moved onto our new and more complicated spike robot kit this week. These kits have more programming functionality, as well as more complicated sensors and motor functions. Despite these challenges, Bram has taken them in stride while teaching the 2 other advanced students how to better navigate the spike program. I look forward to having Bram for the rest of camp.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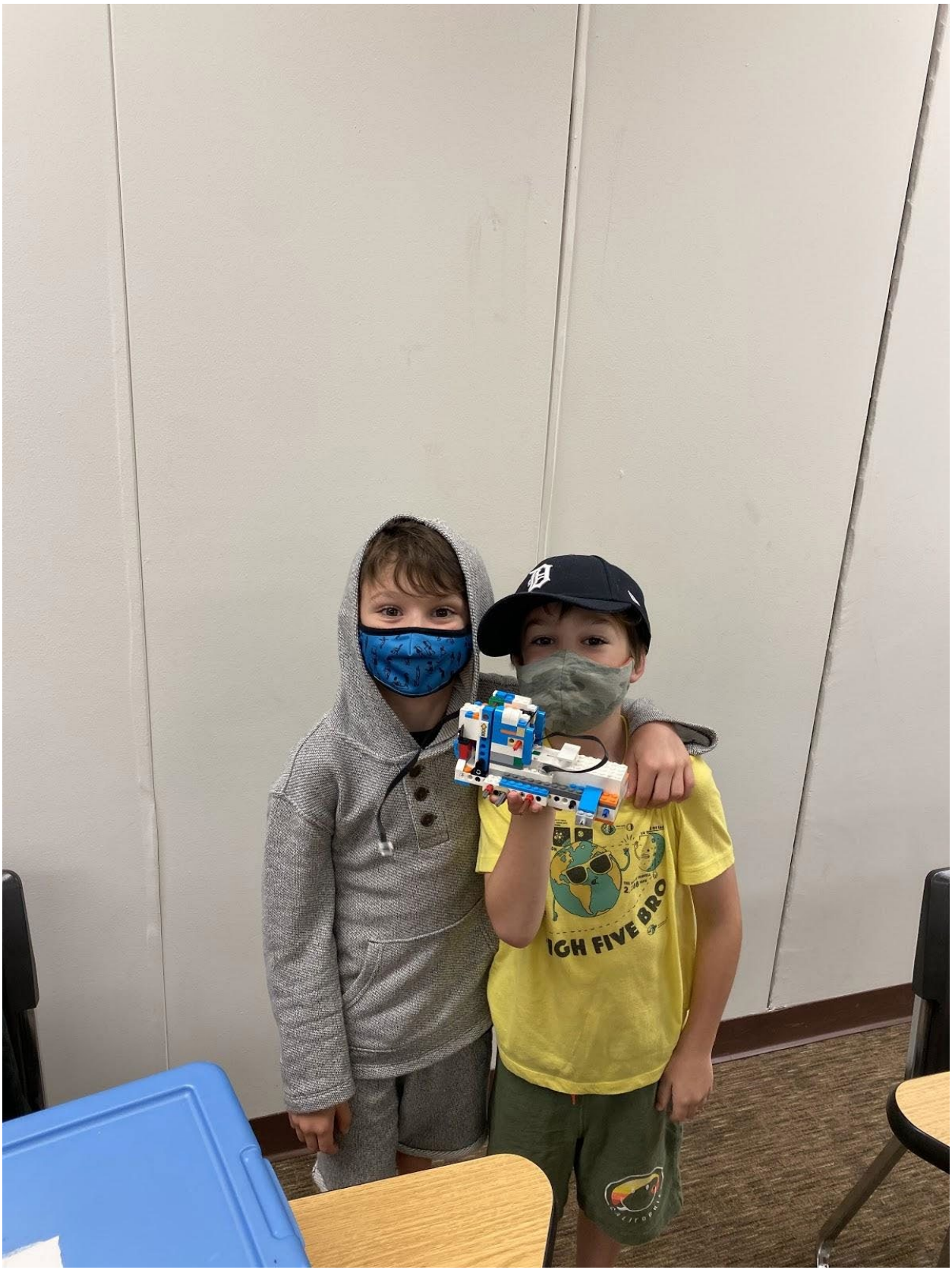
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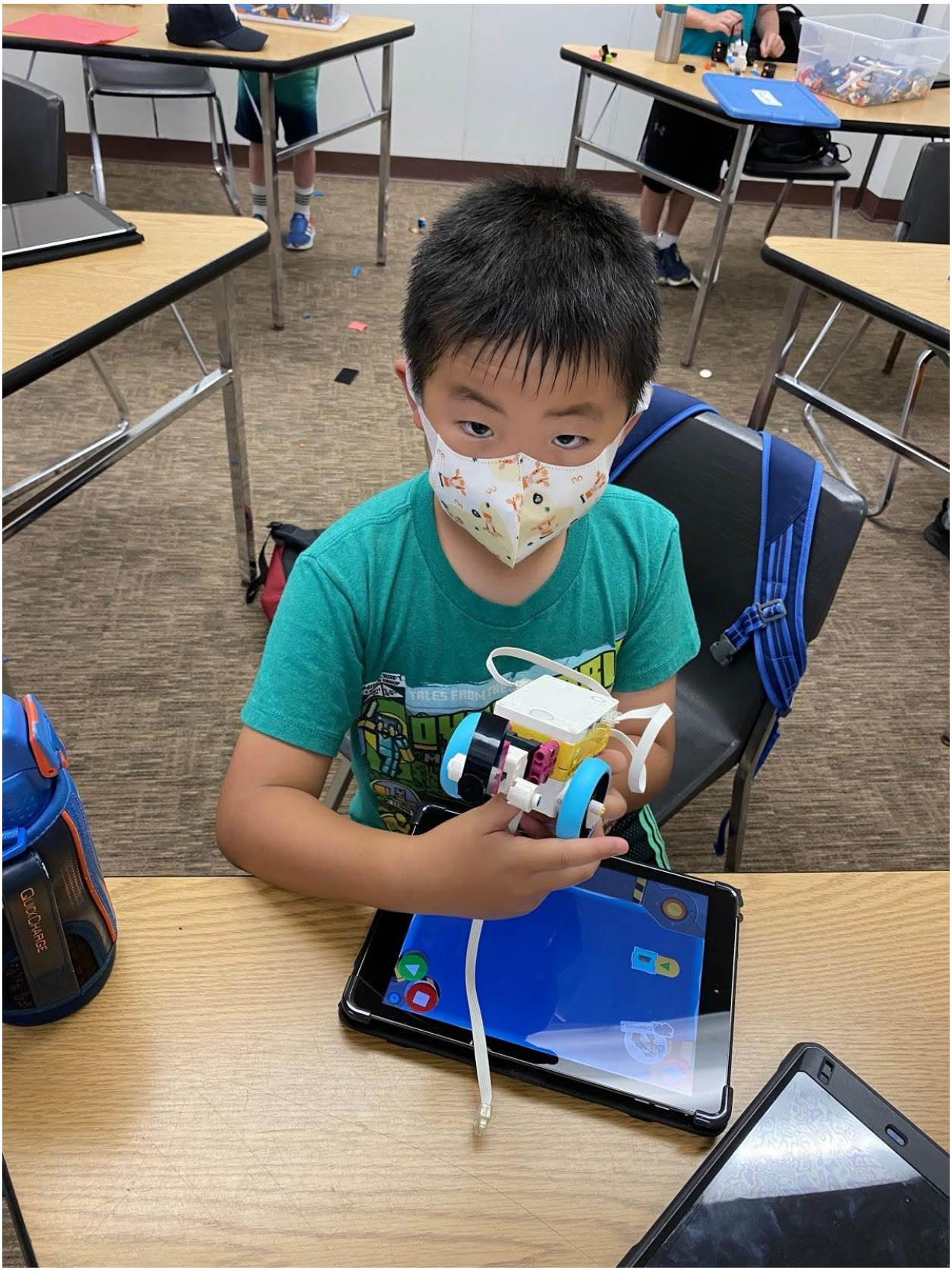
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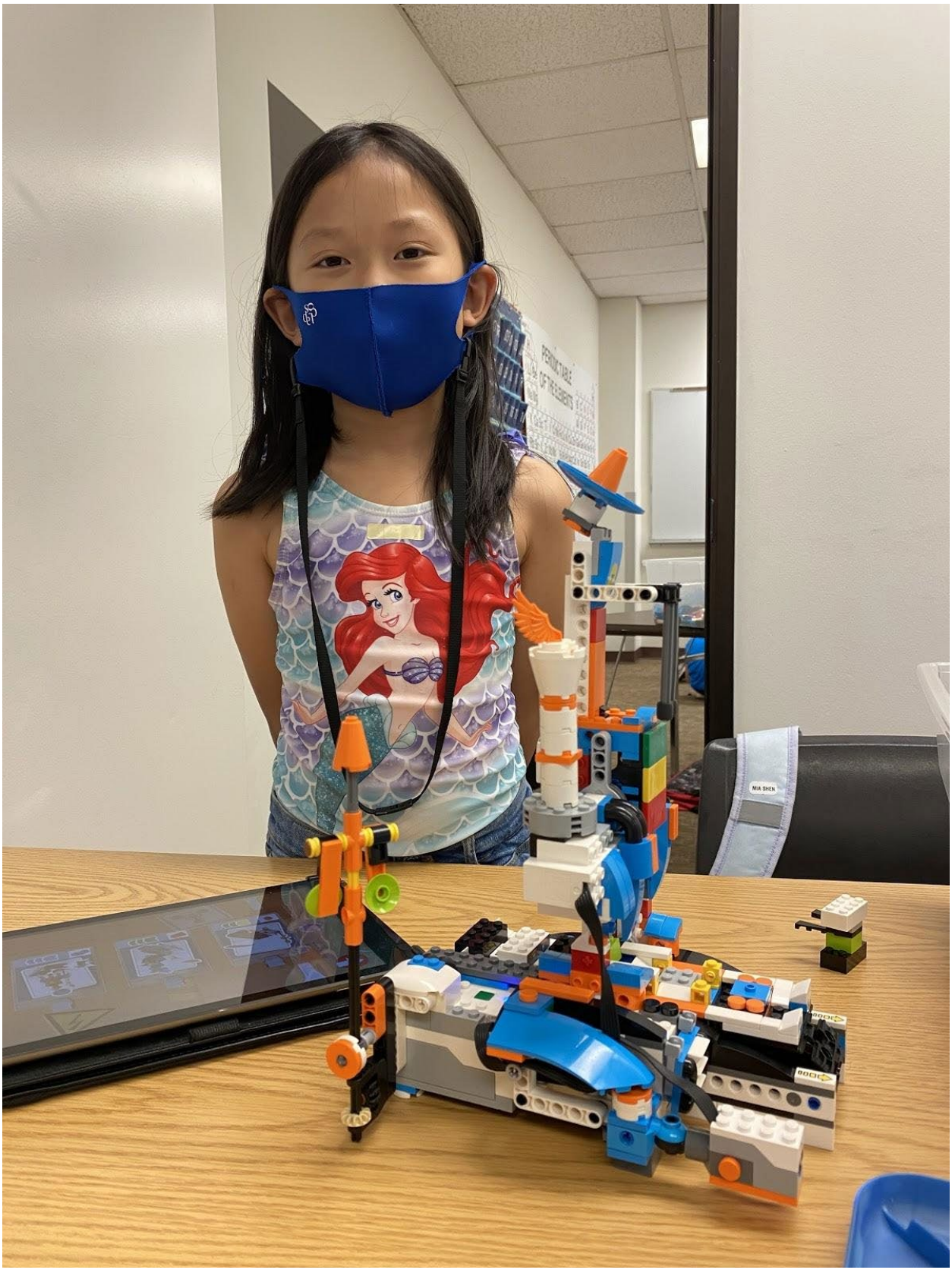
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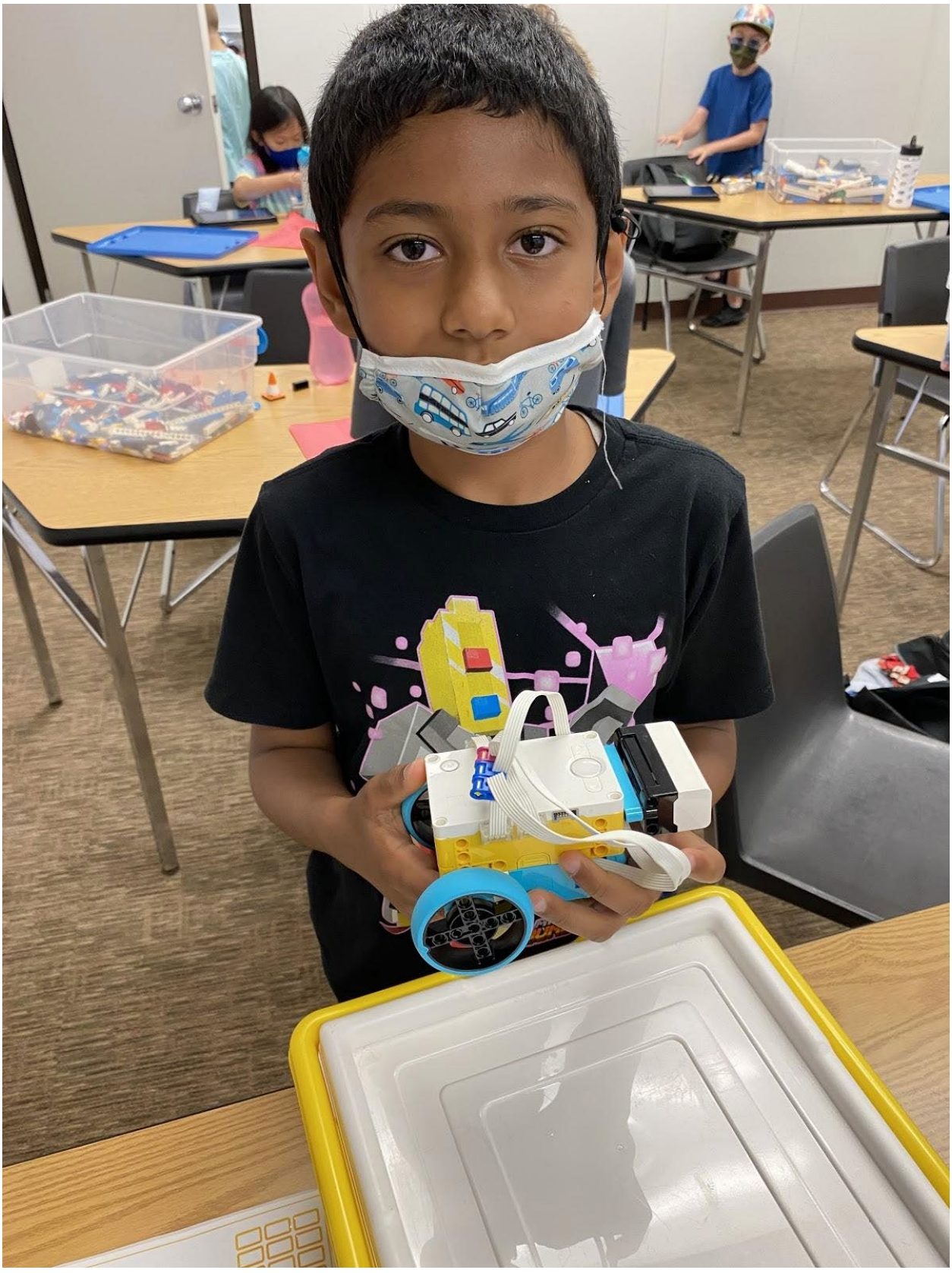


LIFE

1st Grade

Lego WeDo

Week 2 of WeDo is coming to a close and we were so excite to see the campers learn new things this week!

Monday our returning campers continued their projects and the new campers built milo rovers as an introduction to the program.

Tuesday Adam's creativity soared as he built an army of little creatures including dinos and bees. Simone added a scene t her milo and was very active in the classroom. Miles built a

clever lever system that featured a flip out handle along with several other projects throughout the week.

Wednesday Luca combined all his knowledge from last week to build a drill completely from scratch. It featured 2 motors, one to drive and one to operate the drill. George and Roman had a good time racing and constantly strived to improve their cars to one up each other. Finally, James built a fan and had fun programming it to run for different durations.

Thursday Bianca transformed her satellite into a monster alien and then built a whole scene around him. Her imagination continues to amaze us every week. Meanwhile, Charlie built a helicopter to fly around the room.

Friday we finished up some projects and worked on perfecting the codes. James built a dump truck and it was a great end to the week.