

Repurpose Challenge

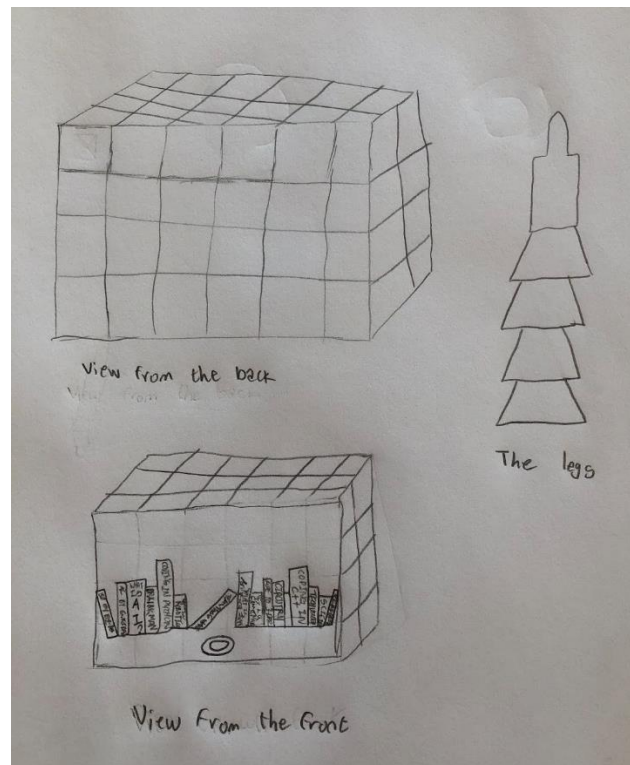
Team 7700G

Rolling Robots, Glendale, CA

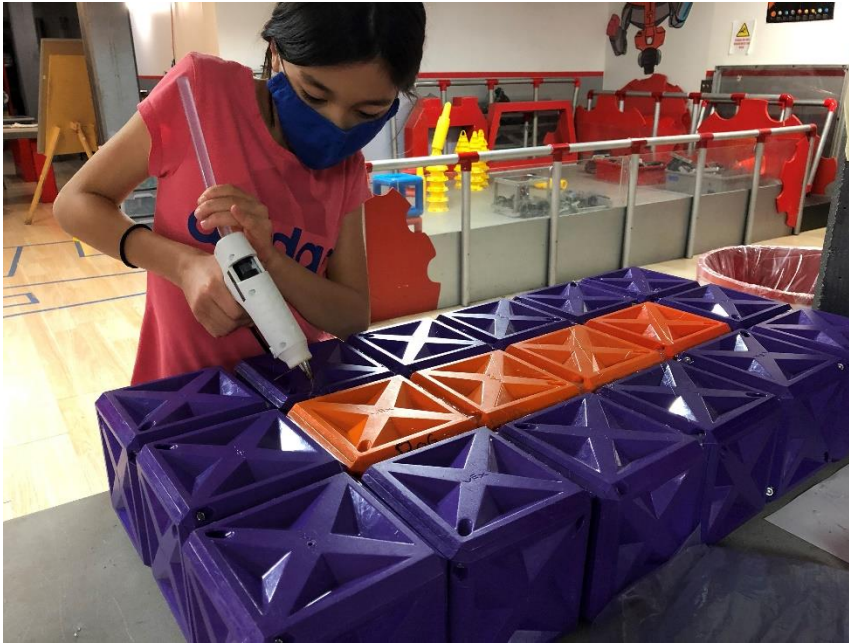
Little Library

Our team was excited when we heard about the Repurpose Challenge and immediately began to brainstorm ideas. We first took inventory of what game elements we currently had in our workshop, then we discussed what we all liked to do. A common interest that we all shared was reading. We also noticed that in our own communities, we saw little libraries that people made to share the books they have. We thought that by building our own, students could read some of the books we have about robotics, engineering, and technology, too.

We all loved this idea and began to pick out which previous game elements we wanted to use. A little library has a basic shape: a box, stands and a door.



For the box, we used the cubes from *2019 - 2020 VEX Tower Takeover* and hot glued each of the cubes together. Unfortunately, the glue wasn't strong enough to keep the cubes completely stuck together, so we added x-shaped square beams from *2016 - 2017 VEX Crossover*. Using the holes already in the beams, we drilled in screws that connected the different cubes so by doing this, we made the walls, floor, and roof more stable.



When we realized that the box would be heavy (since we were using a lot of cubes), we decided that 1 stand wouldn't be stable enough to hold the weight, so we changed our plan and used the cones from *2017 - 2018 VEX In The Zone* to create 4 separate legs. But when we took inventory of the amount of cones we had, we didn't have enough to make it as tall as we wanted it to be. Otherwise, it would be very short and very close to the ground.

So, we decided to stabilize the stands while also making the stands taller. We did this by taking the towers from *2019 - 2020 VEX Tower Takeover* and flipping them upside down, so the bowls would be touching the ground. We sawed the poles so that the cones would fit perfectly onto the poles, and the top of the poles touched the cones, and added hubs from *2018 - 2019 VEX IQ Next Level*. The wide circumference of the bowls and hubs made the stands more stable, and because we were adding height to the stands by doing this, it made the stands higher, so it was easier to grab books from inside.



Finally, we created a door with extra x-shaped square beams that would open and close, so we created hinges by disassembling the cubes from 2019 - 2020 VEX IQ Squared Away to build those hinges.



Now that we had all the sections made, it was time to put it together for the final product! We assembled the sections together to create our own little library, and stocked it with books from our workshop. We plan to display this in front of our workshop so people walking by can borrow books and learn more about Rolling Robots.

(Essay word count: 499)



Thank you!