



Repurpose

By 4606M

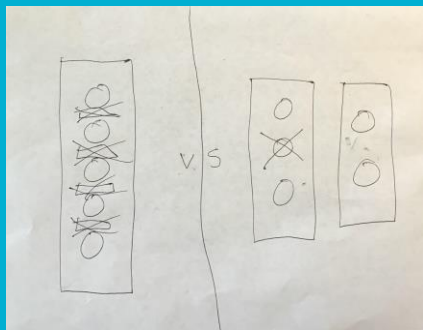
First, we looked to see which game elements our school had, so that we knew what we could work with. We found both hubs (Next Level 2018-2019) and cubes/balls (Squared Away 2019-2020) for us to use. We also had some extra risers.



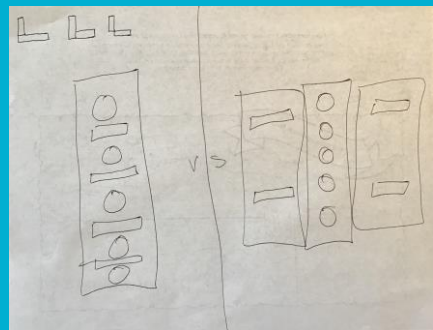
Next, we started brainstorming. We considered a lot of options, and one that kept coming up was a kitten obstacle course, since they seemed to like climbing on the risers. But ultimately, we decided to make a shelving unit.



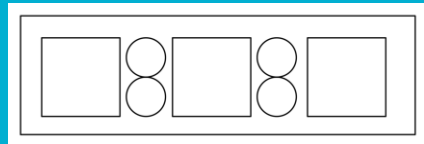
At this point, we were ready to start making some concept and rough sketches. We had done our brainstorming separately, so we had to each draw what we thought the shelves (bookshelf cubes/cubby hubs) were going to look like.



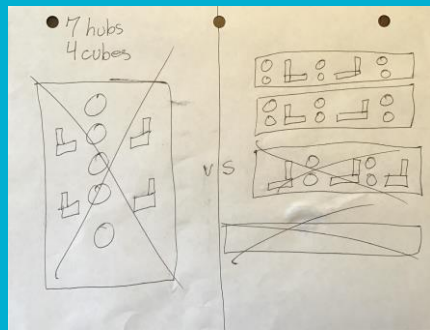
Paola's first idea



Paola's second idea



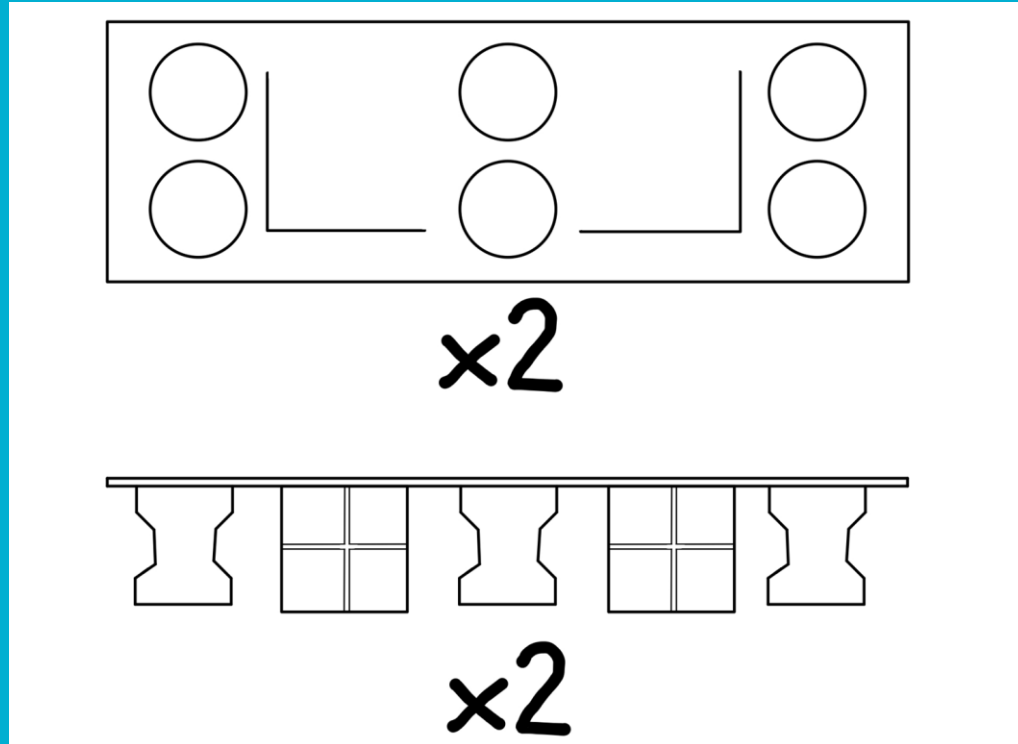
Mina's first idea



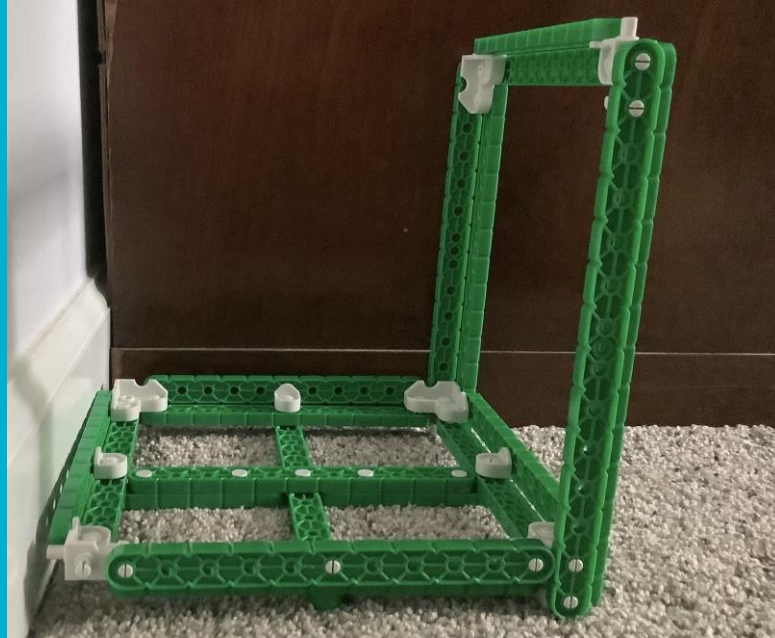
Paola's edits on Mina's idea



After our concept/rough sketches had all been finished, we were able to finalize our idea. We pulled in elements of all different ideas, and came up with a final, more detailed sketch.

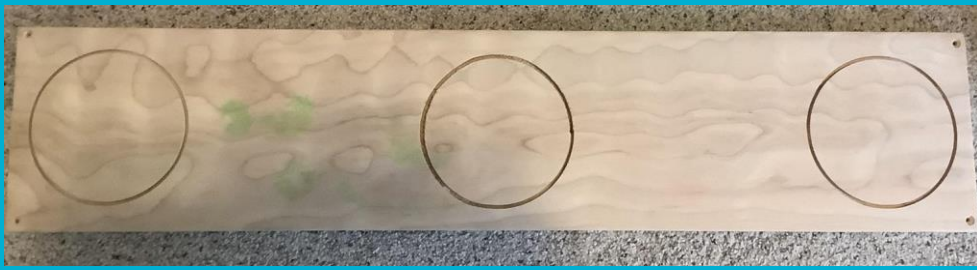


We quickly found that it was difficult to make the bookshelves. We tried two ways: first, combining the crosshatch side and opposite side of the cube. This was difficult and didn't work very well. Then, we combined two sides that were already next to each other, and this worked better.





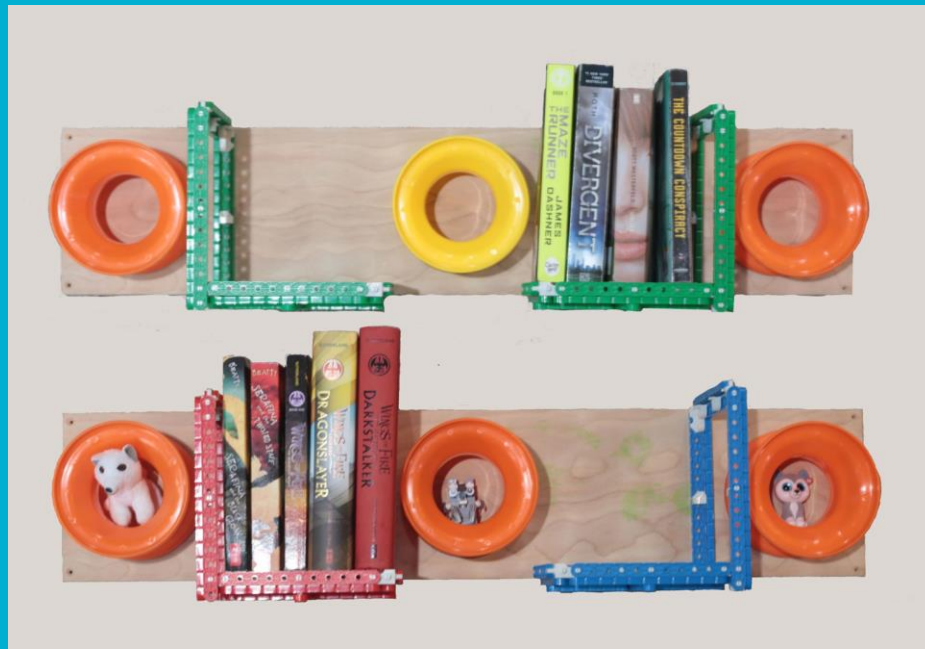
Once we put some books on it, we found that we needed supports on the back and each side to keep books on. The board/wall will provide the back support, and we have a support on the shelf. We edited our design so the cubbies would be up against the bookshelves to provide the final support.



Once we had two bookshelves put together, we were able to start putting cubbies on the boards, as we had the measurements we needed from the bookshelves (which we didn't end up changing from 7 in). We did find that the cubbies were bigger than we had expected, so we did just one cubby between each bookshelf. We had 8 in between each cubby, so one was flesh up against the bookshelf, and one was an inch away (on the side w/ supports). We used a CNC machine to secure the cubbies to the board. (Which is why we used a board, so we wouldn't ruin someone's wall.)



At this point, it was easy to copy our earlier design on the bookshelves to make two more bookshelves and put them on the board. The cubbies didn't need any glue to stay put; they were very stable in the holes. The bookshelves did need more support to stay on. We did not have a second board soon enough, so what we have currently accomplished is shown here.



What the final design would be is shown here. We will screw in the bookshelves once we have a second board. This shelving unit could belong in a home or school environment. THANK YOU!