We created this part to solve the problem of a bending base. In previous years of robotics the base of the robot was bending inward, as well as this years starter bot. This piece will act as motor housing, and extra support for a sturdier drivetrain.

It fits snugly into the bottom of the robot, with the motors connected to the inside, and the rest of the drivetrain on the outside. It would be used to help stabilize the robot and stop parts from being dragged on the ground.

For the first step of making this part, we had to collaborate to see what was the best way to solve the problem. After we came up with this basic design, we had to take measurements and convert them into millimeters, mainly because we took measurements is centimeters. Then, after converting the measurements, we put them into tinkercad and created the piece. After we got the piece, we saw that the size of the housing for the motors was spot on, but the holes for the pegs were way off, as you can see in the pictures below. To be completely honest, we couldn't find the current version of tinkercad we were using, so I'm guessing we used the most current one.

We learned how to use 3D design software and how to 3D print things. We will probably use 3D design software in the future, and probably for work or school. Engineers use 3d printing a lot to test and make prototypes before they build the real thing. This software helps us with competitive robotics for online challenges. It helped us create this project, and if we do this online challenge again, it will help us then. If you become any sort of engineer or builder or inventor or anything like that, you would probably use 3d printing. Maybe to make a 3d model of a bridge and test that, or of a turbine, or of a tiny robot of Benjamin Franklin. Anything including building or designing would probably use 3d printing.