Robotics Online Challenge Final Report

We created this custom piece as a variation of the normal VEX 2x2 piece, but instead of holes there are connectors already sticking out, and one side is tilted 45 degrees, so that you can twist the next piece that you attach. This new part would be used like any other VEX IQ piece, but it is lighter and smaller, so it can be manipulated in different ways to fit in different places in the robot. Our part can be used as a decoration or to help with the robot and was made to fit with the other parts. It is a 2x2 piece that is smaller than most VEX IQ parts. It has 4 connectors on each side, one side is 45 degrees tilted of the other one, so you can change the direction of the connectors. The process we used to make the piece was making a rectangle and curving the edges, then on the 2 bigger sides we put 8 connectors overall. On one side there was 4 in each corner, and on the other side, there was also 4 connectors in each corner but turned 45 degrees, we wrote on top of the piece “VEX IQ Online Challenge” in dark red. We then downloaded the piece onto a .stl file.

The software version of Tinkercad we were using was Tinkercad 1.5 2019_10_14. What we have learned from this project was how to use Tinkercad, or a version of 3D modeling. It is important that we learn more about how to use 3D modeling programs such as Tinkercad since this will be something we will have to use in the future. As a team, we will use 3D design software in the future probably to help with our different technology classes, or competitions. It will help if we are in a competitive robotics team, because when we can't work or meet in person, we can use 3D modeling software from home. We might need to use 3D modeling software when we are older, since technology has to do with many career paths. It will probably help since it is a very effective and efficient modeling tool, if you don’t have the resources to model something in real life