

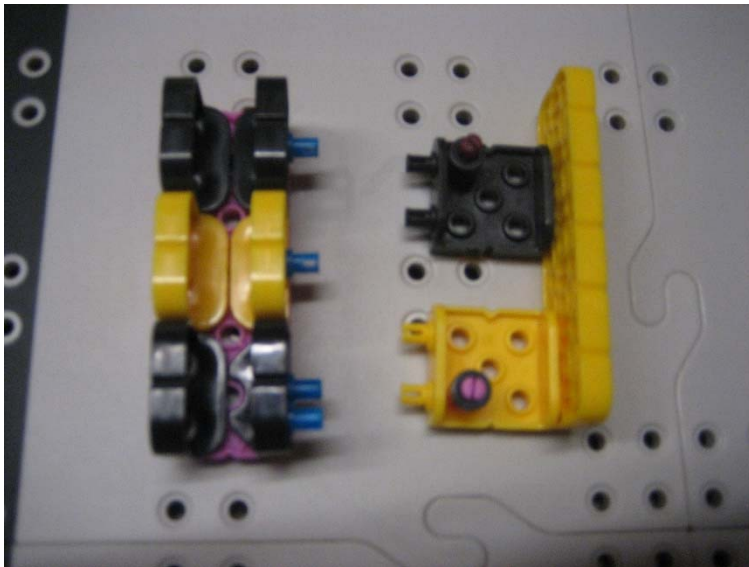
Make It Real CAD Engineering Challenge Sponsored by Autodesk®

Team: 10470W School: Oak Mountain Middle School, Birmingham, Alabama, USA

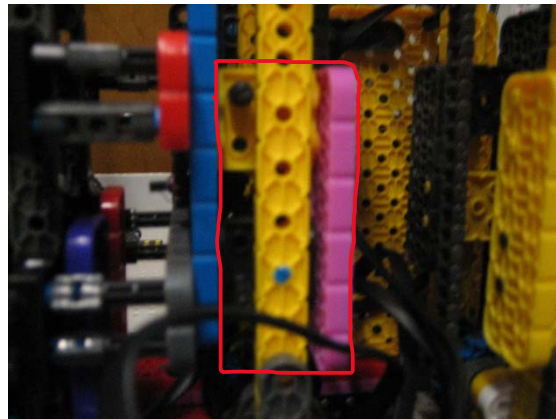
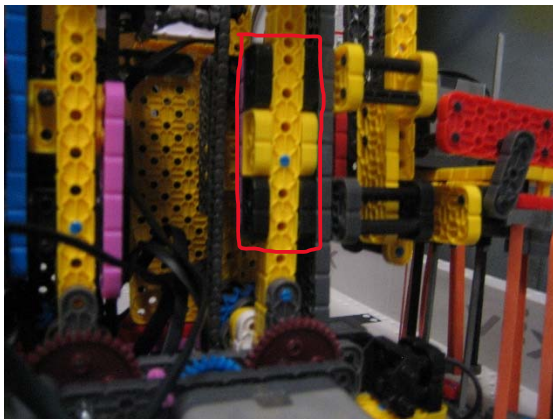
Hi my name is Piper Watson, and I'm an 8th grade student at Oak Mountain Middle School, I've been in VEX IQ for two years. I'm on the team 10740W with two other great girls. I am the main builder for our team. While building our robot this year, I realized that we needed to improve our robot. Thankfully, there is an online challenge to help me create and experiment with the creation/design a new part.

Why this part: We wanted to create a "U" Channel that would side up and down our 1X20 Beams on our Robot. The U Channels that we created are made out of 7 existing VEX IQ parts that make up just one U channel.

Here are two examples of our U Channels that we use on our robot:

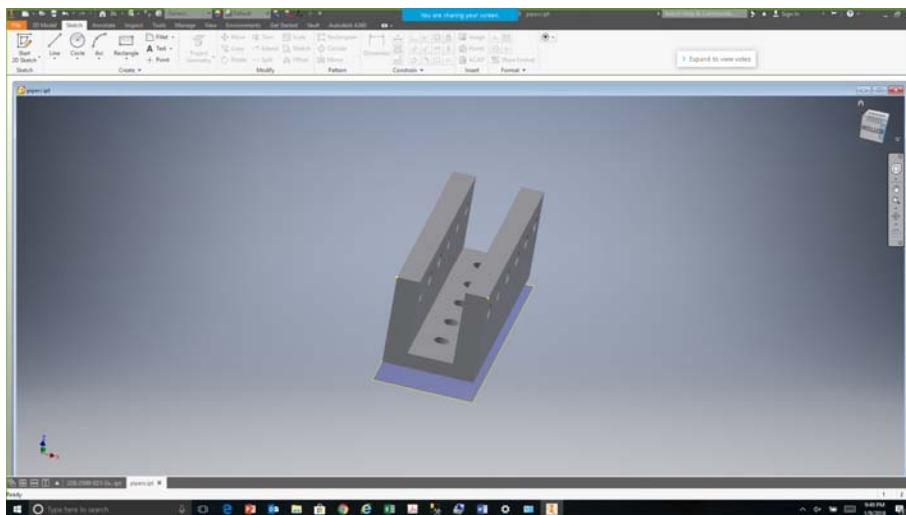
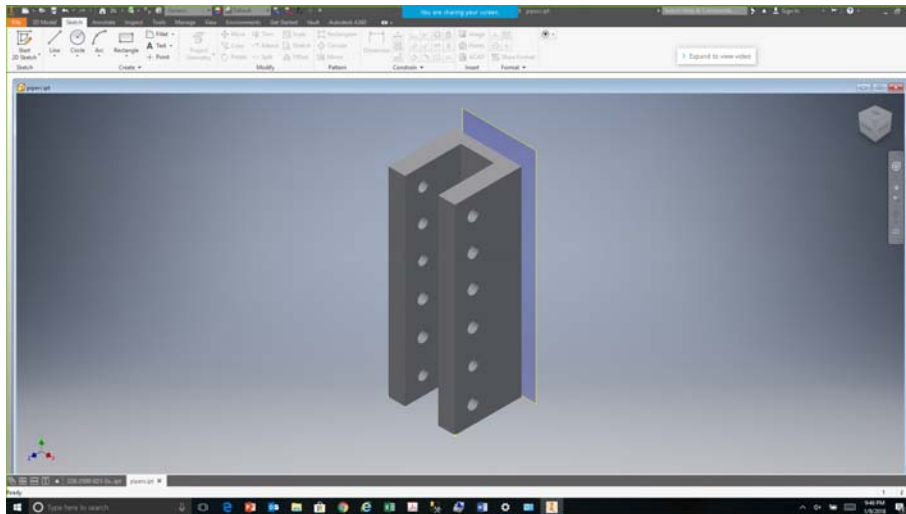


Here is what our current U channels look like on our robot:



These existing VEX IQ parts are not very tight on the beam and create a lot of back and forth movement. With our new designed part, it will be one piece of plastic and be much tighter on the beam, which should provide a better sliding motion. Because it will be a one-piece part, and not 7 pieces, it won't come a part like our existing U channels, which will make it more reliable in our VEX IQ competitions.

This is what our new designed part will look like:



Using the 3D printer: The 3D print was surprisingly easy to use and interesting. I would like to be able to use one at home for art projects that I enjoy doing in my spare time. For example: last week I had to make a paper mache heart for a school project. It could've have been so much faster, easier, and cleaner if I made it using a 3D printer. I'm usually always working on some type of art project. I think I will talk to my parents about buying a 3D printer for home use.

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