# 3D Group Report

With the availability of the new 3D printing lab on campus, the car can be made internally with the college and by the team without having to outsource production or expend significant funds. With the growing availability of 3D printers in the average home, the ability for kids to customize and print their own parts is a large key towards this product's learning experience. Once we had our hardware planned out, we began to design the working model. It was decided that a basic plate that the hardware could be attached to would be the easiest for kids to work with and make at home. The outer shell can be shaped and customized by the kids, allowing for some more fun and creativity along the way. By including some base files with the kit, we can allow the kids to make the entire car as they wish. The model we make ourselves will be the base form (the files and hardware that come with the kit). By showing how simple it is to make, we can prove its effectiveness in teaching kids these skills without being very complicated.

We made these base files using a simple online CAD program, TinkerCAD, the same program we will recommend to those who are interested in the kit. It's a simple geometric software that does not require any CAD experience, so it makes sense for a project like this. Our main challenge was getting all of the hardware to fit on a simple pad that can be made at home, but can also fit a customizable covering. We decided on the idea of making the base files a part of the kit, and have them ready to be uploaded to the CAD program. By building onto the base files, we can make sure that all parts fit as they should, but still allow kids to edit the parts as they wish.