F1 CO2 Car

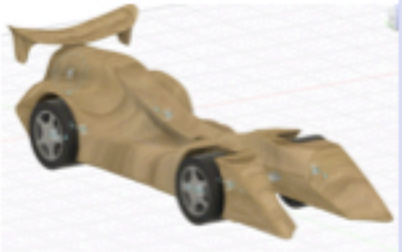
Year 12 Engineering Course

In this task we were introduced to a designing software called fusion 360 and were tasked with producing a f1 in schools model CO2 car of our own design.

For this task I created three prototypes which were an improvement on the other according to aerodynamics (drag coefficient). On the left are images of my three prototypes. The first design while having a unique and interesting design, it did struggle to have a smooth wind flow as the front of the acted as a kind of barrier for the wind due to it's steepness. Then for my second prototype I added a more shallow front end which dramatically increased the drag coefficient of the car but I believe that it could be better, so I also ended of changing the rear wing of the car as well, making it thinner and giving it a slight downwards angle to reduce the resistance it was causing to the wind flow. For my final design I decided to go with a open end front wheel design which dramatically reduced the coefficient bringing it all the way down to 0.24.

1

2



Final design