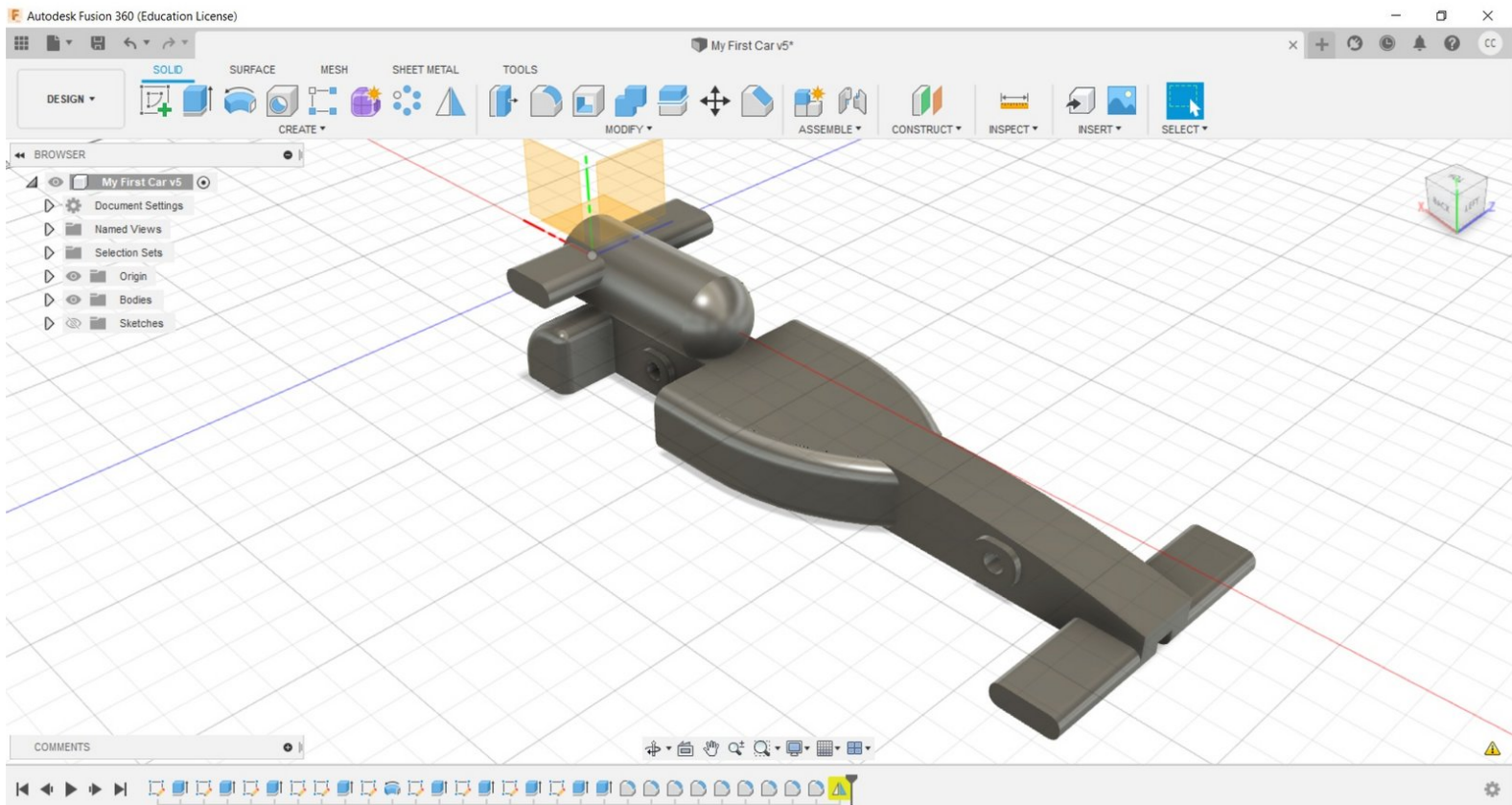




9 - Body Adjustments

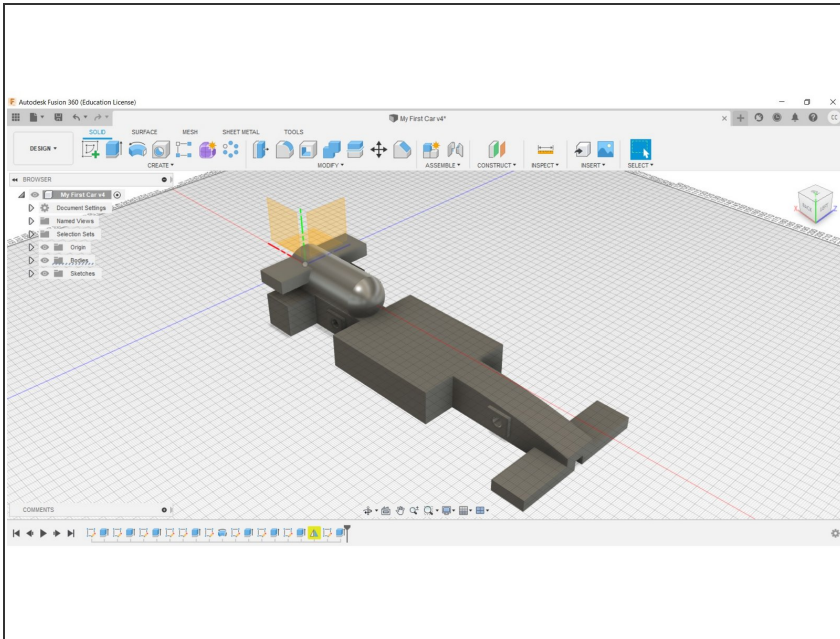
Written By: REA



INTRODUCTION

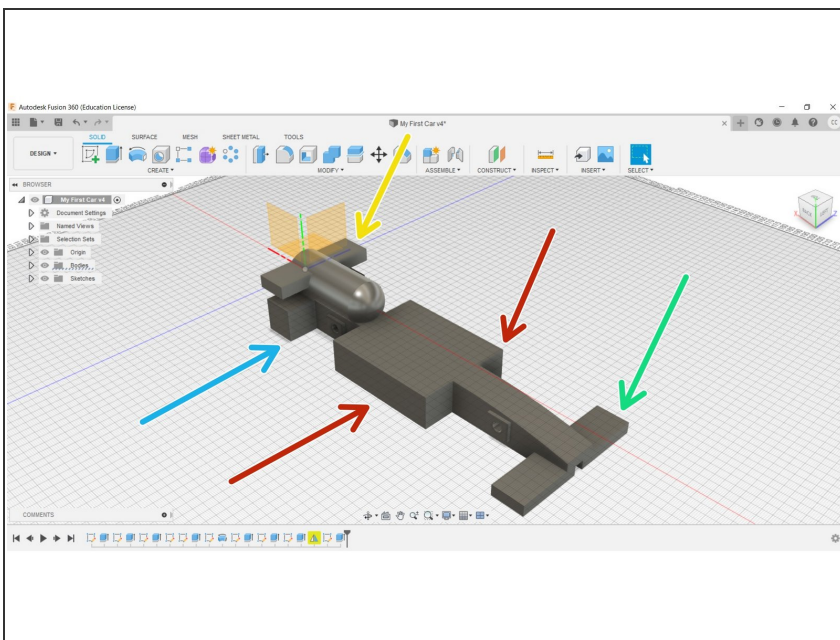
This final guide covers the adjustments that can be made to personalise your F1 in Schools car design and tested during virtual analysis.

Step 1 — Identify Potential Changes



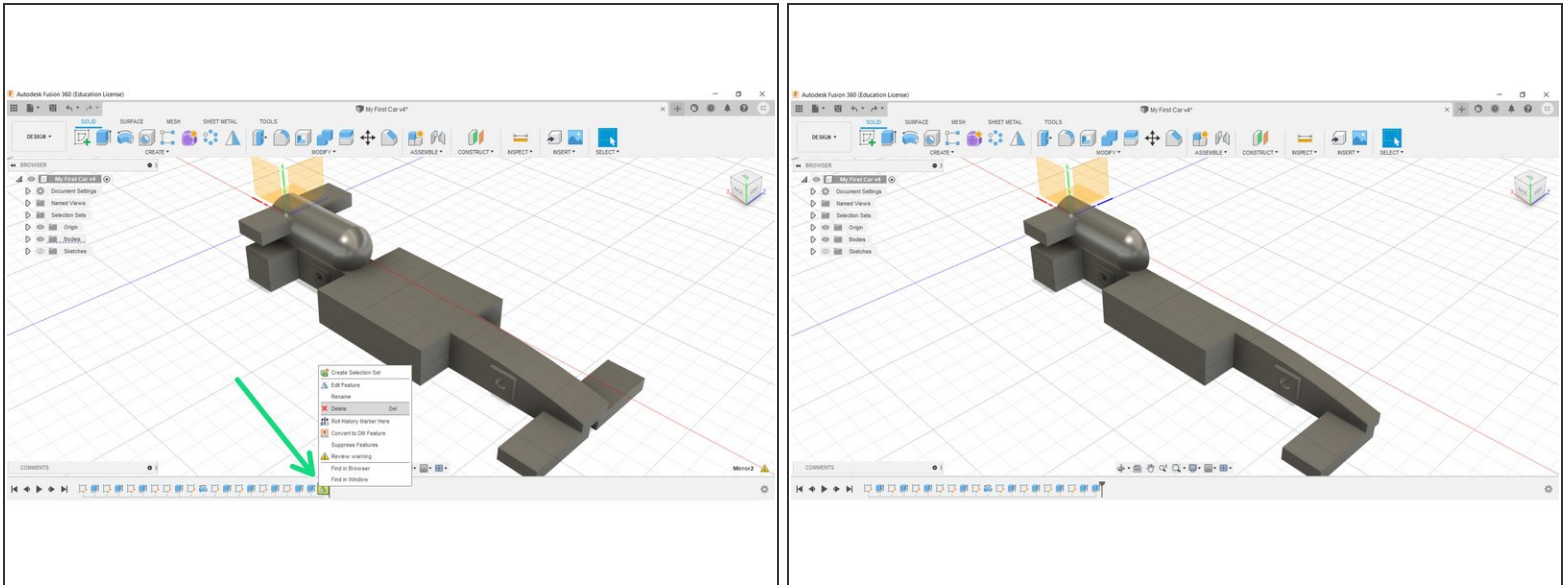
- Take a look at your car. Notice how many of the features are currently very blocky, with many sharp edges and flat surfaces.
- In line with the aerodynamic theory you may have learned in class or in your own time, you may have come to understand such shapes are not desirable.
- Identify some components we can make changes to.

Step 2



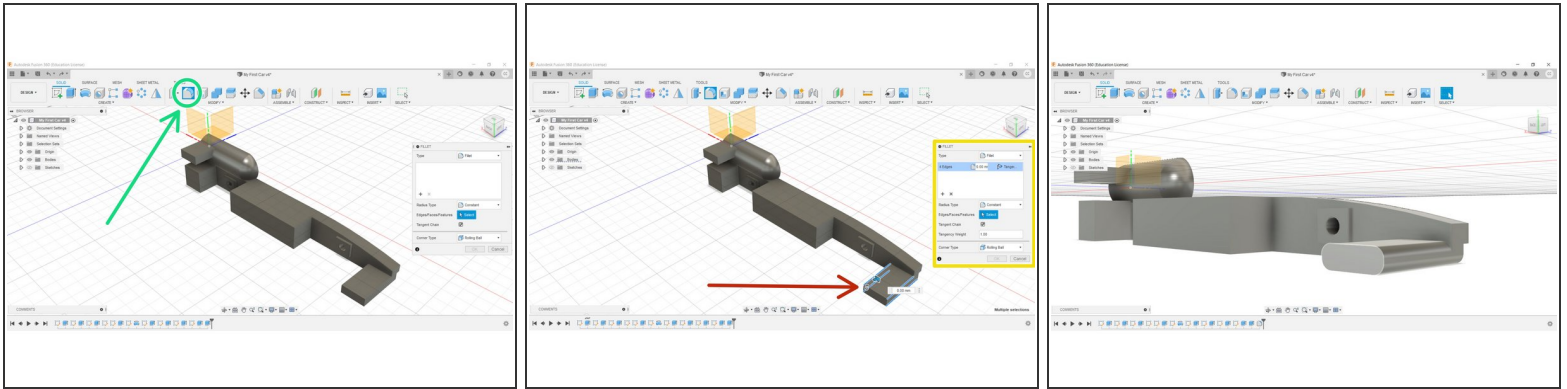
- Great job at identifying components we can improve the aerodynamics of. These may include:
 - Front Wing
 - Side Pods
 - Rear Wing
 - Rear Pods (Body)

Step 3



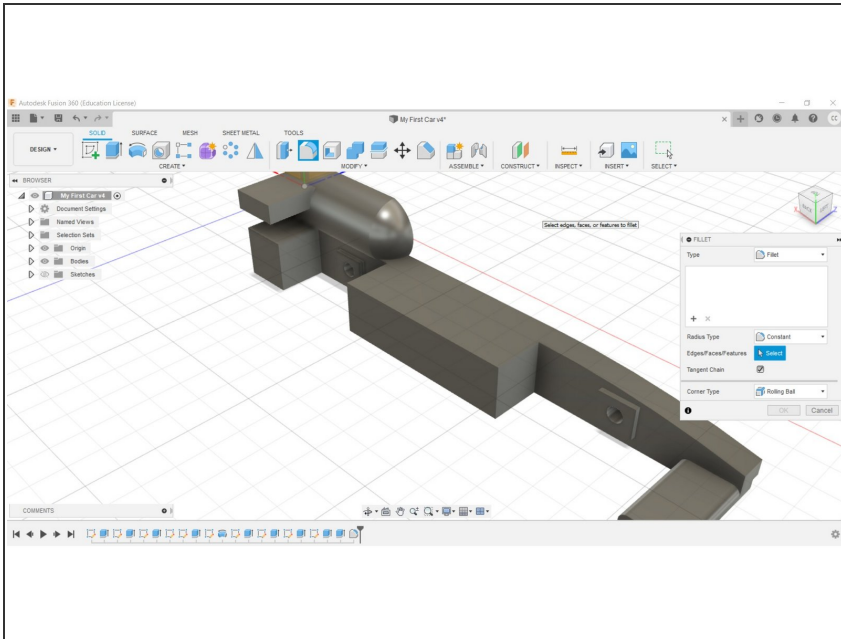
- To progress, we must first take a step back.
- Right Click the mirror operation in the design history at the bottom of the page, and click delete.
- ❗ We will re-mirror the car again once we have made the necessary changes.

Step 4 — Front Wing Modifications



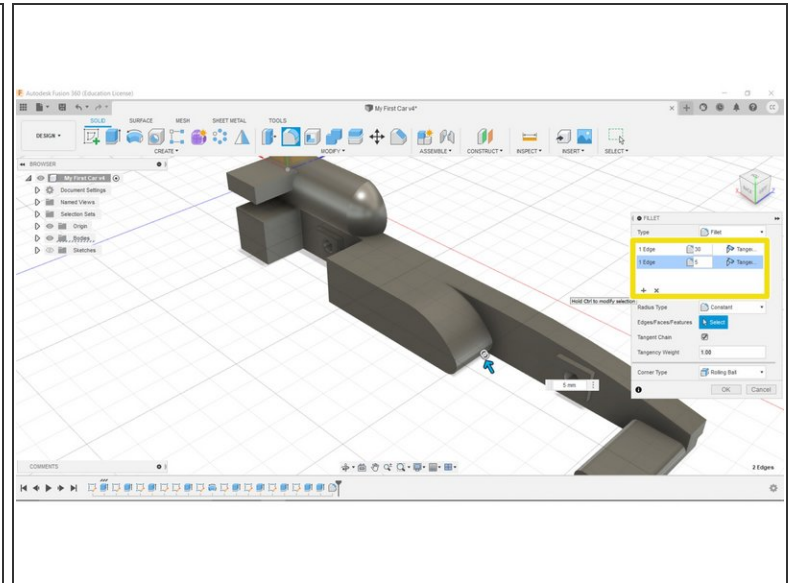
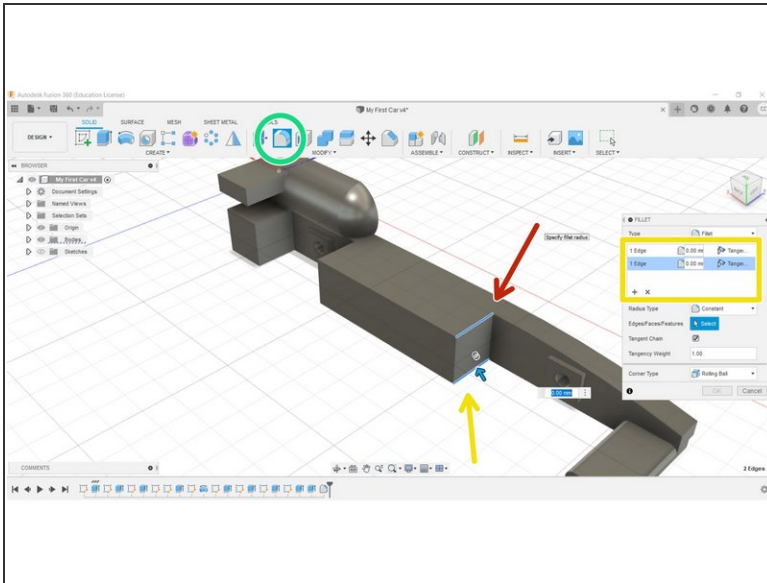
- Let's first work on improving the front wing. Note how the shape is currently very blocky.
- Select the fillet tool from the Modify Menu at the top of the page.
- Select the desired edges you wish to place the fillet on; in this instance, we have selected all four horizontal edges.
- Once you have selected all four edges, change the Fillet Radius to a figure between 1.5mm - 3.5mm; In this instance, we have selected 3mm.
- Click OK to complete the Fillet, and check out your rounded front wing!


Step 5 — Side Pod Modifications




- Next up are the side pods.
- You may again use the Fillet Tool for this operation, or you may also experiment with using the Chamfer Tool, or your own custom design, Sketched onto the side pod and then Extruded - Or a combination of the three!
- In this instance, we are using the Fillet Tool.

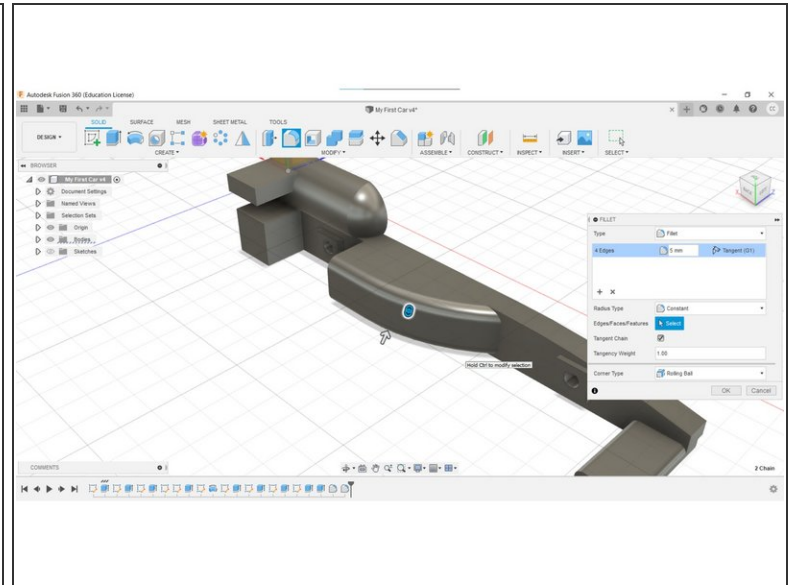
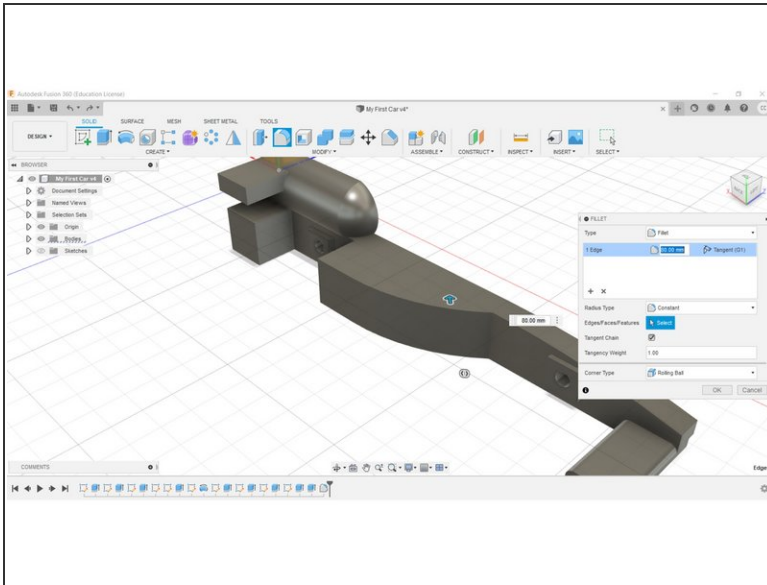
Step 6 — Side Pod Modifications



 The following designs are only ideas and recommendations; We recommend getting creative and designing your own unique car!

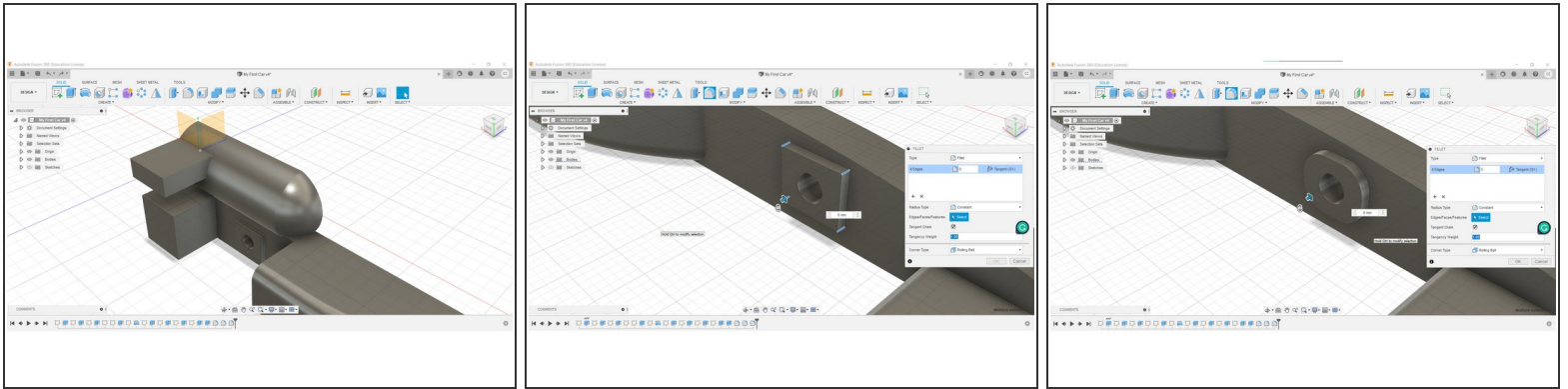
- Using the Fillet Tool, select the top edge at the front of your Side Pod.
- Next, select the plus button in the Fillet Menu, and then select the bottom edge at the front of the side pod.
-  This will allow you to create two unique Fillets simultaneously.
- In the first box, type 30mm, and in the second, 5mm. This will create a unique shape that is more rounded on the top side.

Step 7 — Side Pod Modifications



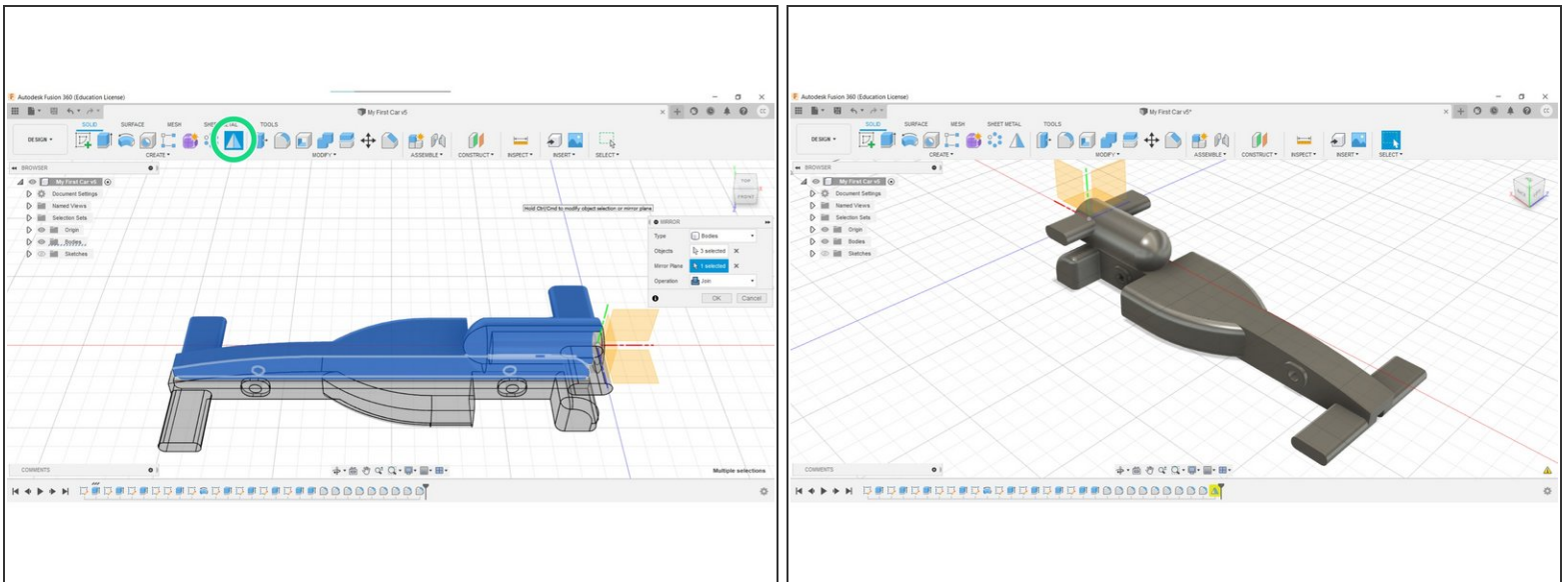
- You might however choose to implement a design that pushes air around the side of the car, as pictured.
- Or perhaps a combination of both. (Picture 2)
- Get creative and experiment with different designs!

Step 8 — Other Components



- From here you can shift your focus onto improving the components at the rear of the car.
- You can apply the same skills we have been learning to the Rear Wing, the Rear Pods and even the Axle Supports.
- Get creative with your car design!

Step 9 — Re-Mirroring the Car Body



- Once you have finished modifying your car design, you can repeat the steps from 'Guide 8 - Body Mirror'.
- 🎉 Congratulations, you have completed your first F1 in Schools car design!

