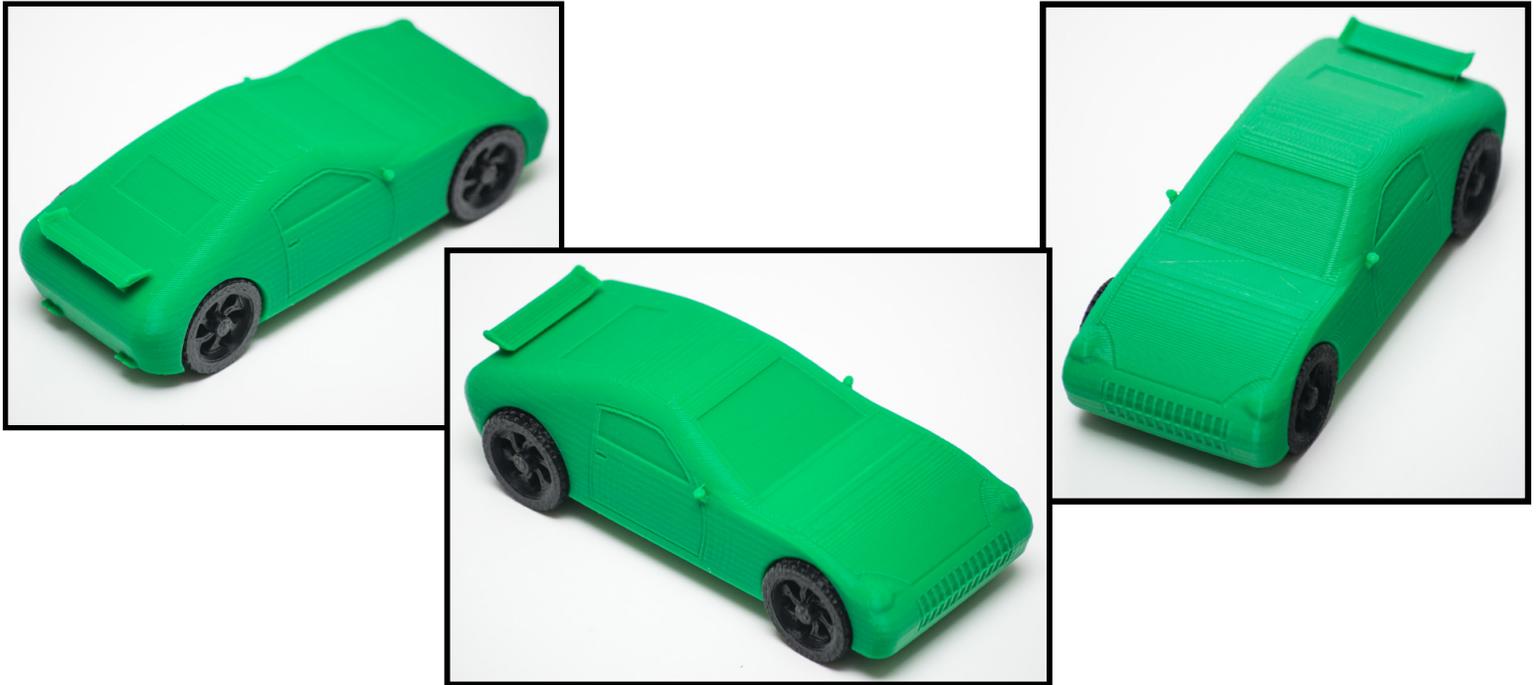


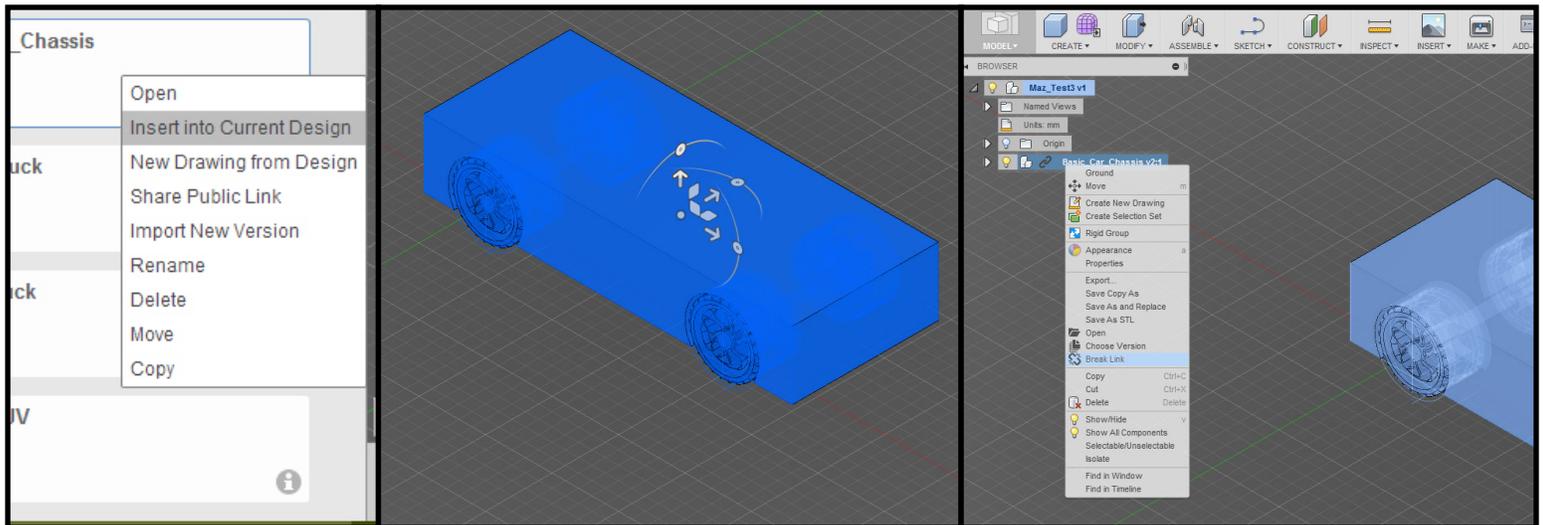
# TOY CAR IN FUSION 360

(Fusion 360 Tutorial - Intermediate Level - Written by Maz a.k.a. Rose M.)



## STEP 1: IMPORT CAR BASE

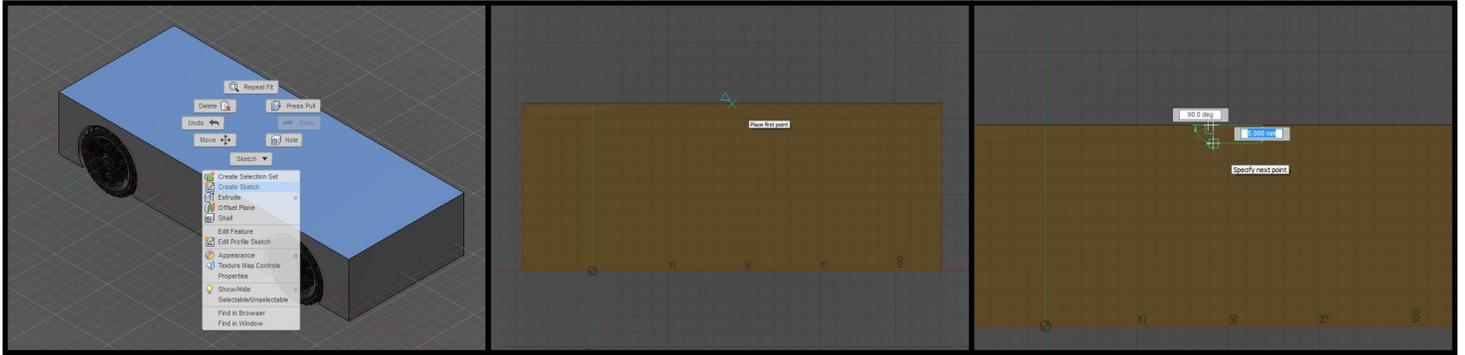
• Import the basic car chassis to start designing. (There are optional car chassis that are farther along, such as truck, sports car, and SUV. To follow along with this lesson please use the basic car chassis.) To do this, first save a new design file with a unique name of your choosing. Expand the data panel on the left, right click (option click) on the basic car chassis, select "Insert Into Current Design", leave the default position, and click okay or press enter/return on the keyboard.



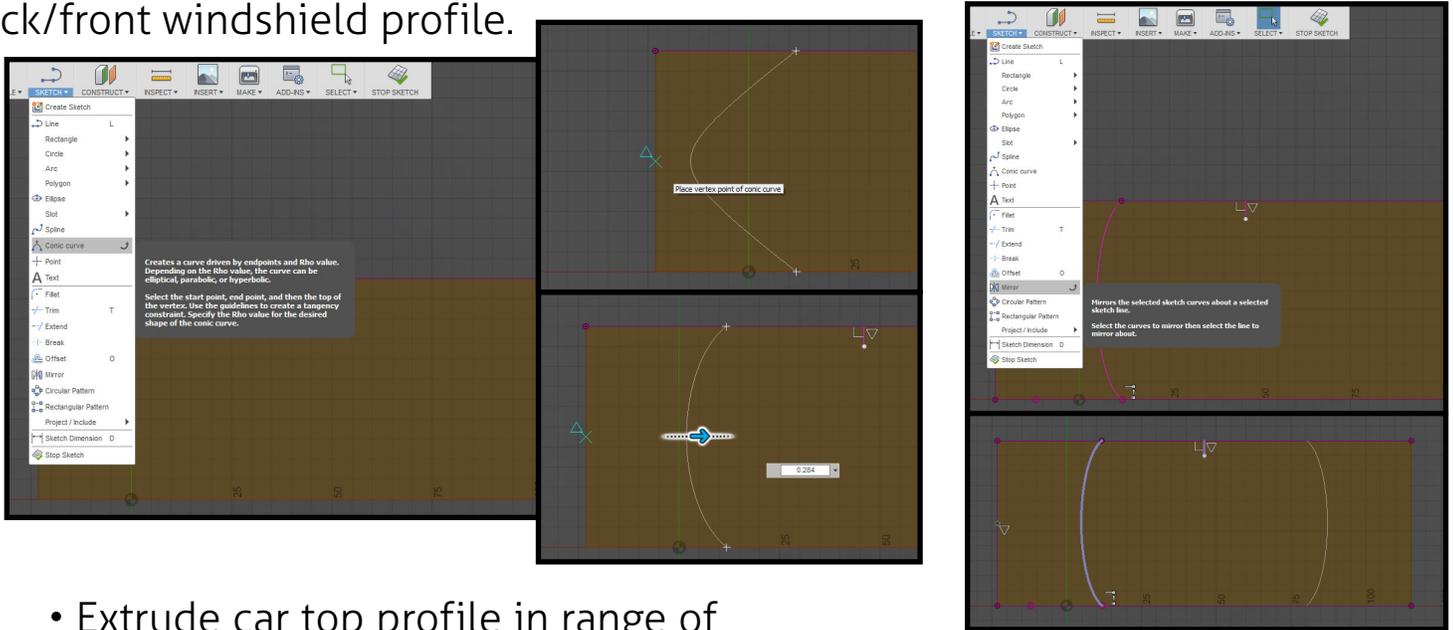
• In the browser tree on the left, right click (option click) on the component "Base\_Car \_Chassis", and select "Break Link". (Do not break links on the wheel components or move them.)

## STEP 2: CREATE TOP HALF OF CAR

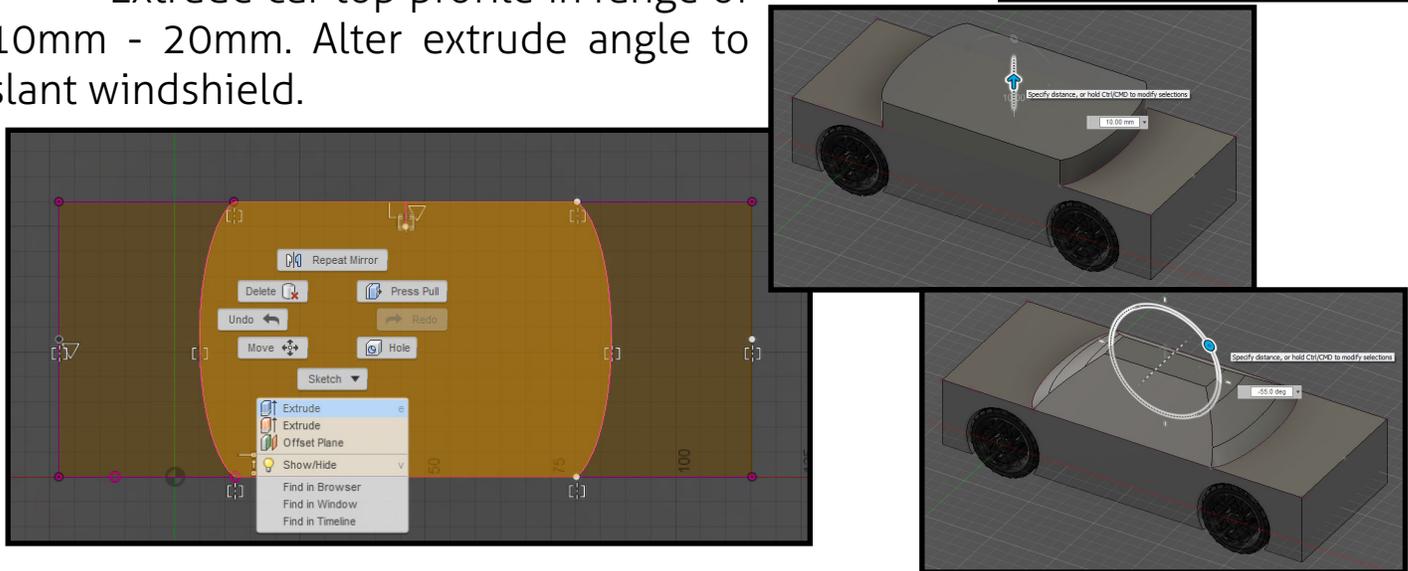
- Use a sketch to extrude the top half of car. Select the top face of the basic car chassis and select create sketch from the right click (option click) menu.



- Create a short centered straight line perpendicular to the long edge. Use the "Conic Curve" tool from the sketch menu to create curve profile for front/back windshield. Use mirror tool in sketch menu to mirror curve to opposite side for back/front windshield profile.

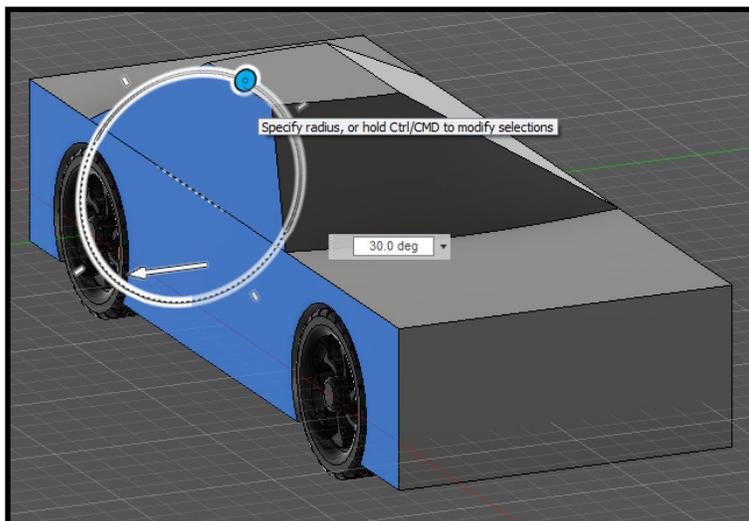
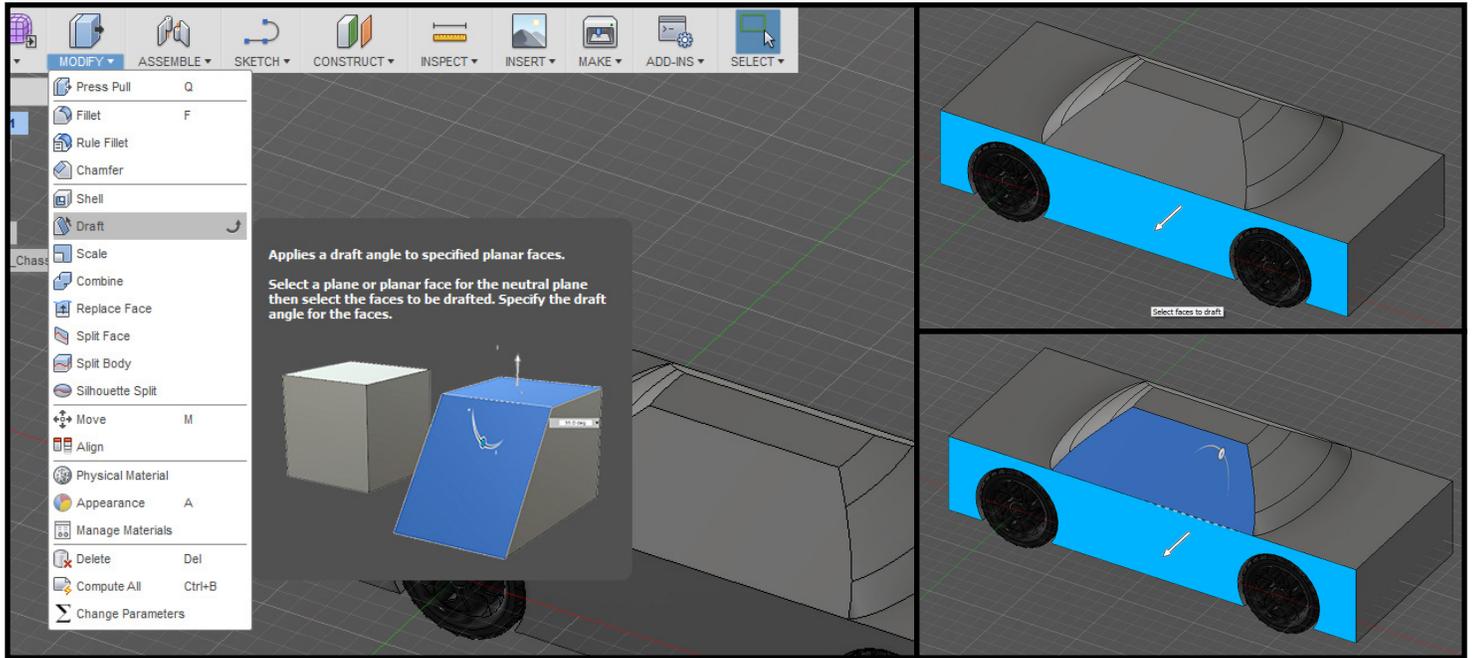


- Extrude car top profile in range of 10mm - 20mm. Alter extrude angle to slant windshield.

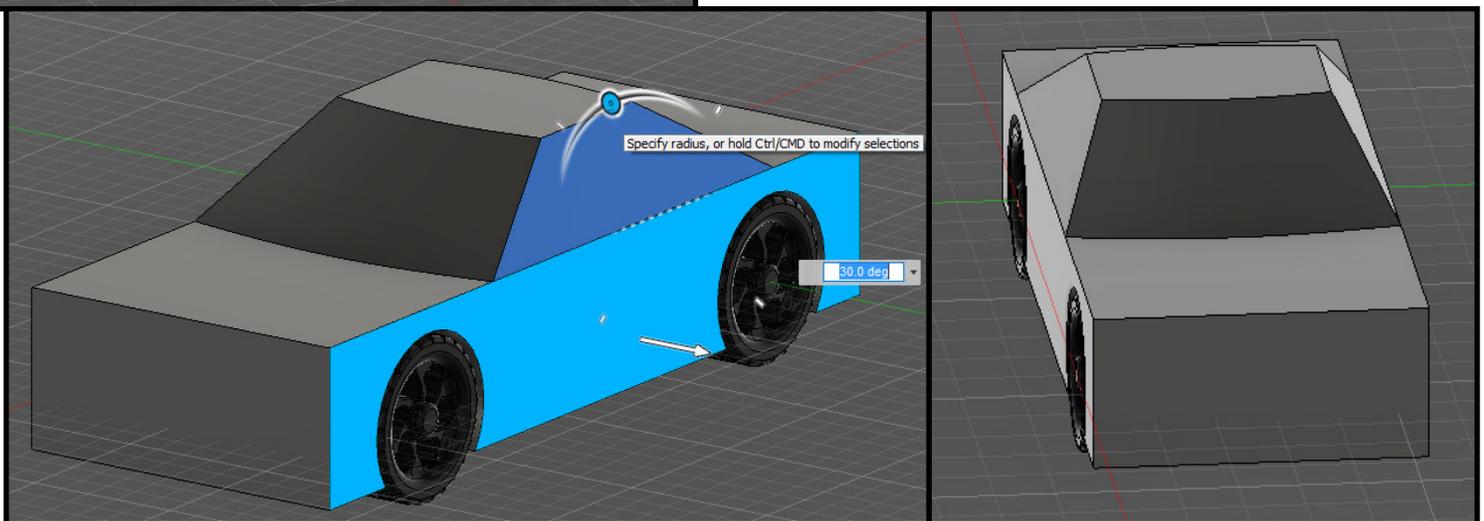


### STEP 3: ALTER ANGLE OF SIDE WINDOWS

Use the Draft tool to alter angle on side windows.



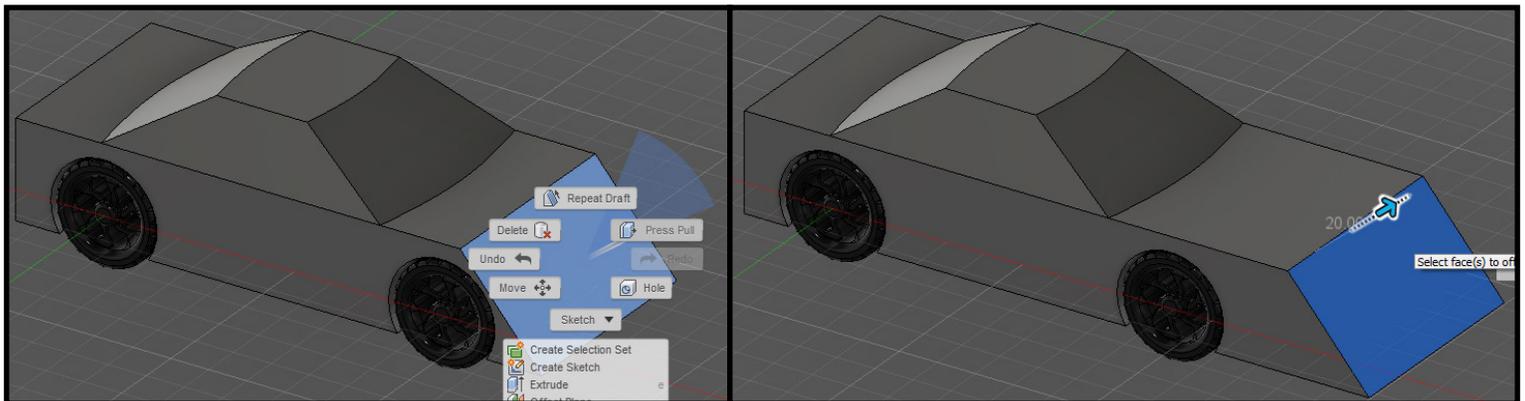
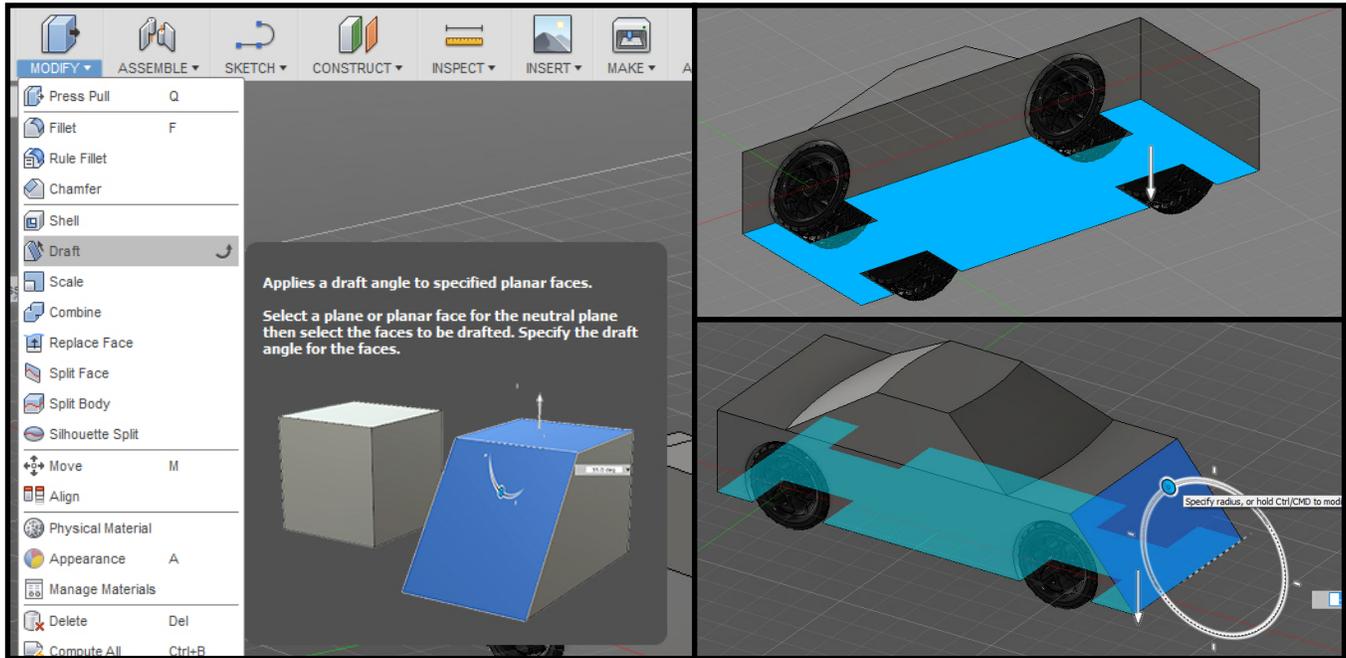
- To do this, in the tool bar at the top, click "Modify ▼" to expand the menu, and click "Draft". Select the long car side face as the "Plane". Select the side window face and use rotation arc to drag face to desired angle. Repeat draft tool for opposite side window.



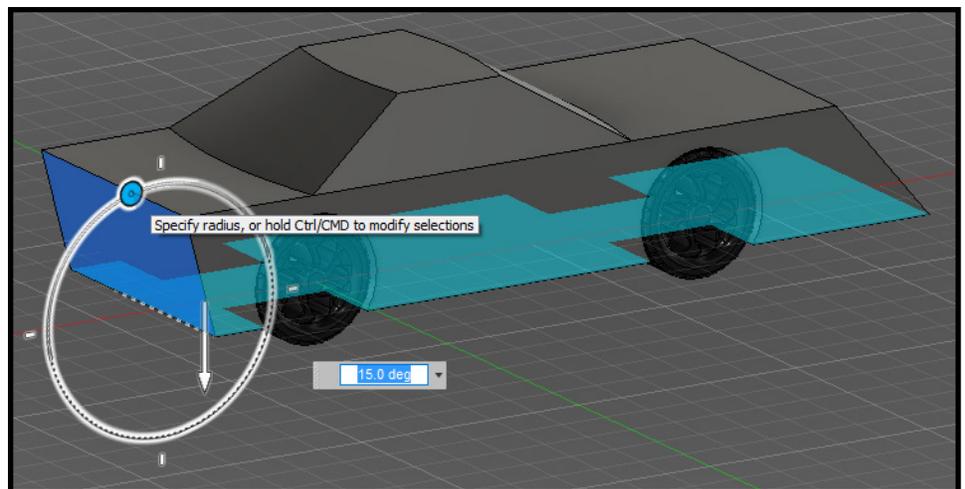
## STEP 4: ADD ANGLES TO CAR BODY FRONT & BACK

Use the Draft tool to slant the front bumper face closer to the windshield.

- To do this, activate the Draft tool, select the bottom face of car chassis, and select front face. Use rotation arc to slant front face. Use "Press Pull" to offset front angled face away from front wheel wells.

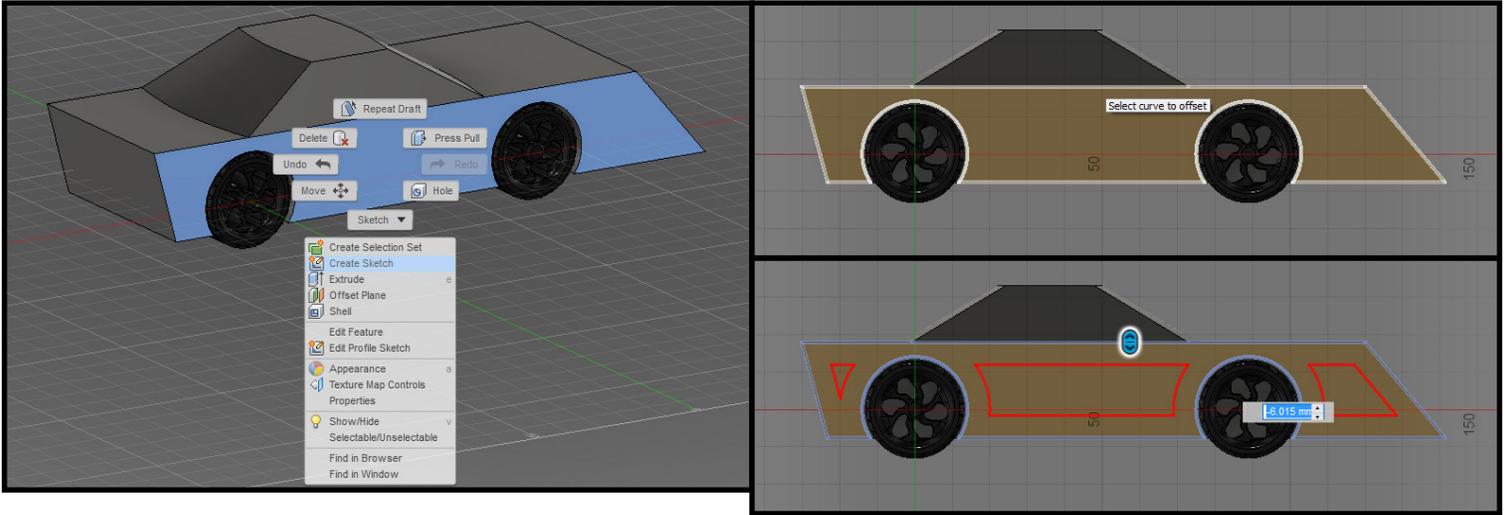


- Repeat for the car back face.

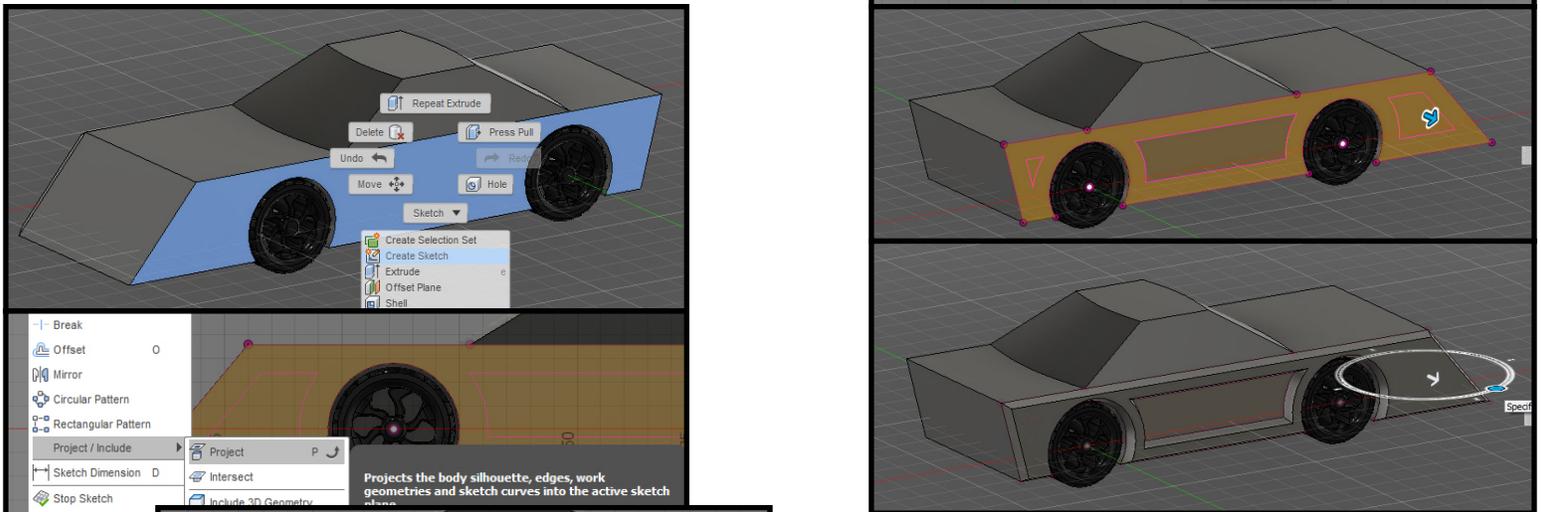


## STEP 5: ADD DESIGN TO CAR BODY SIDES

Create offset sketch on car side and extrude with angle.



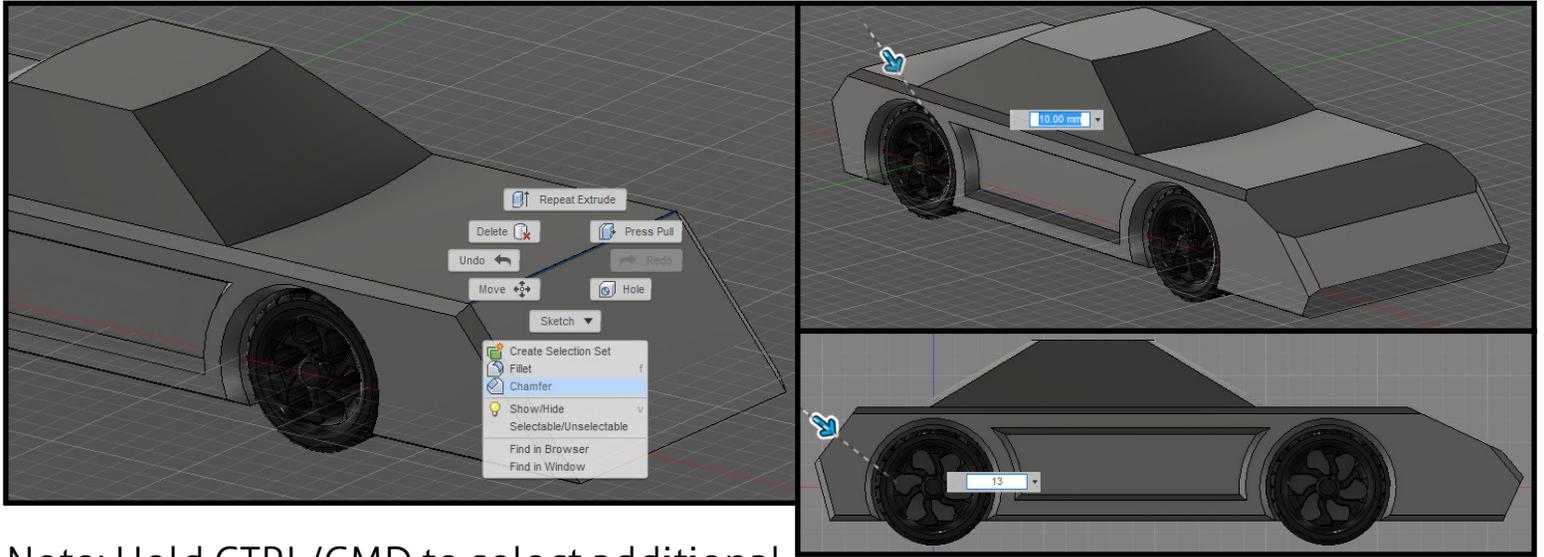
- To do this, select the long side face of car body, create new sketch, use offset sketch, and offset inward inside range of 3mm - 7mm. Extrude outside of sketch in range of 3mm - 5mm and alter angle.



- Project sketch onto opposite car body side and repeat exact extrude values. To do this, select the opposite car body side face, create new sketch, unhide previous sketch for first side, use "Project" in sketch menu, and project the inside sketch lines of opposite side sketch profile. Extrude with same values used on opposite side.

## STEP 6: FURTHER SHAPE FRONT & BACK BUMPER

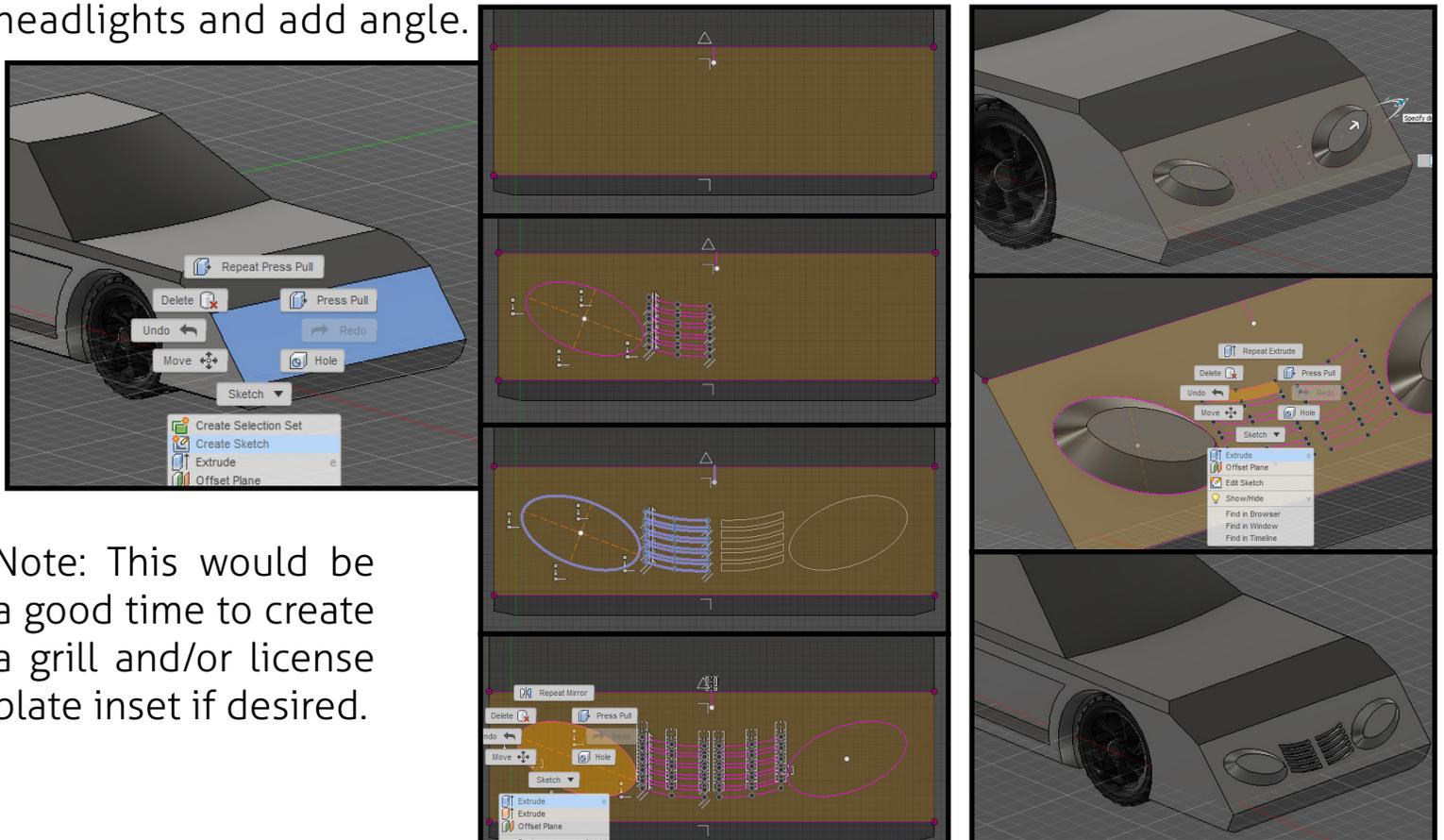
Use Chamfer to further shape the front and back bumpers.



Note: Hold CTRL/CMD to select additional edges to Chamfer.

## STEP 7: CREATE HEADLIGHTS, GRILL, AND/OR LICENSE PLATE INSET

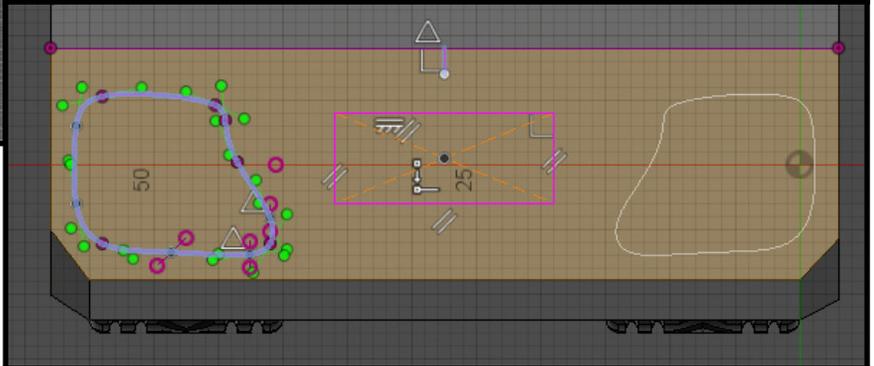
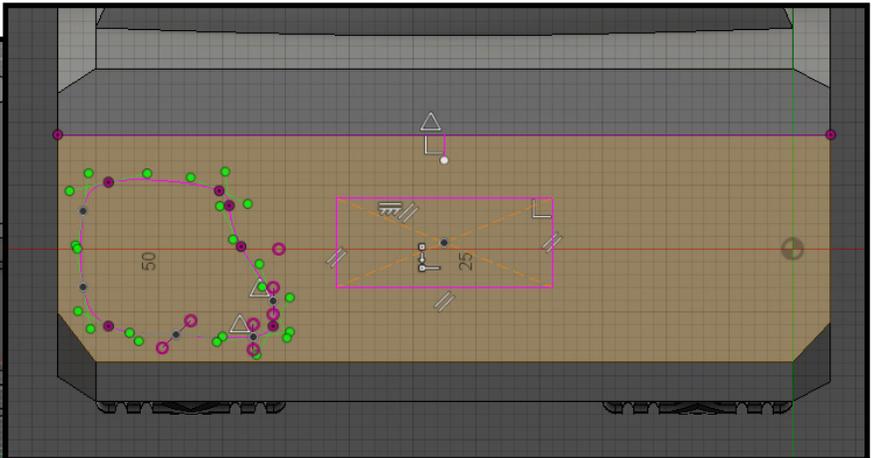
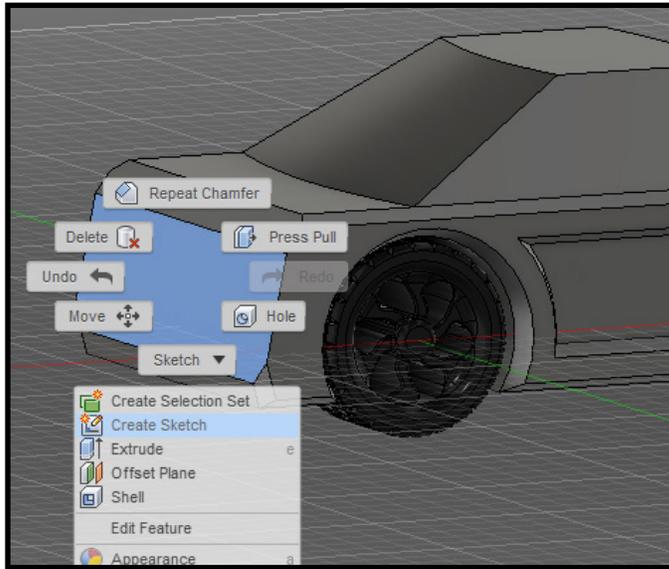
• Select the front bumper face, start a new sketch, and create headlight profile. Use mirror sketch to copy headlight profile to opposite side. Extrude headlights and add angle.



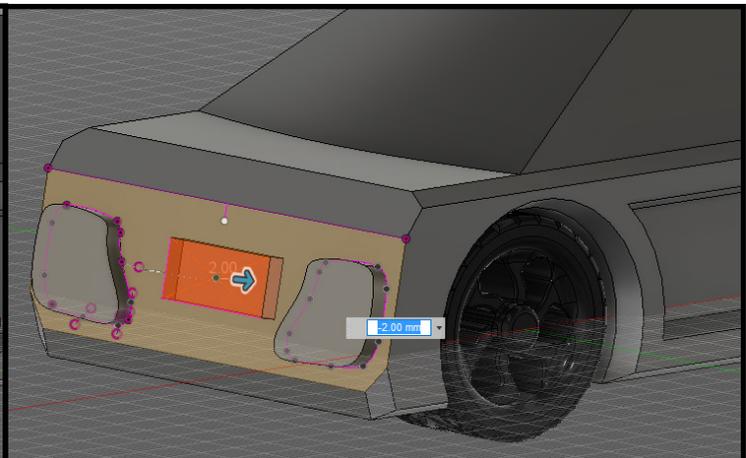
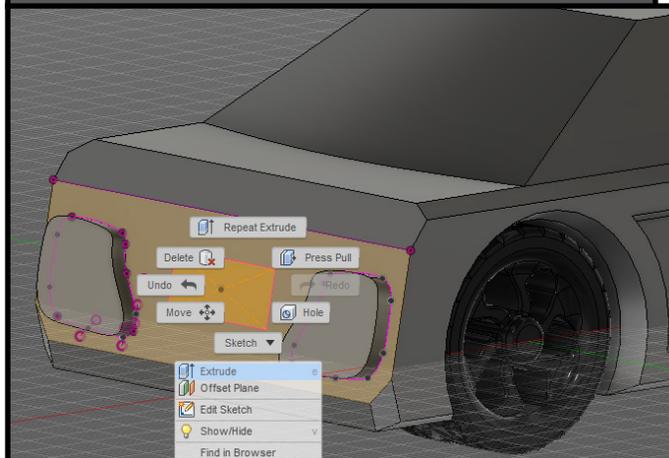
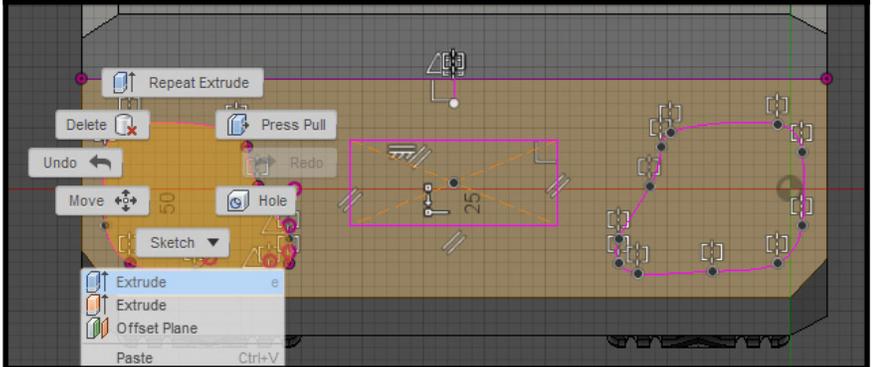
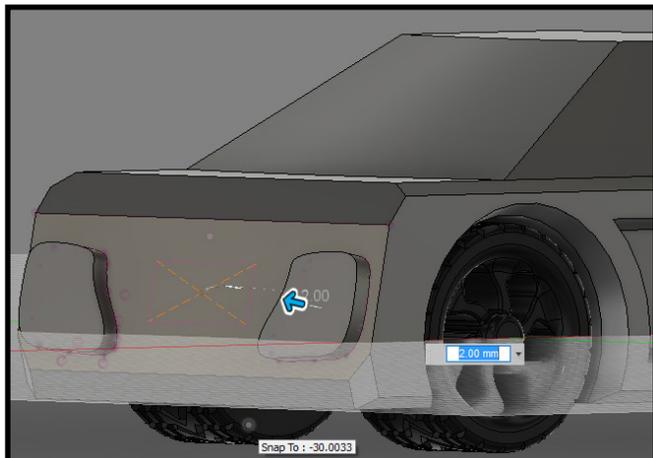
Note: This would be a good time to create a grill and/or license plate inset if desired.

### STEP 3: ADD TAIL LIGHTS AND/OR LICENSE PLATE INSET

• Select the rear bumper face, start a new sketch, and create tail light profile. Use mirror sketch to copy tail light profile to opposite side. Extrude tail lights and add angle.

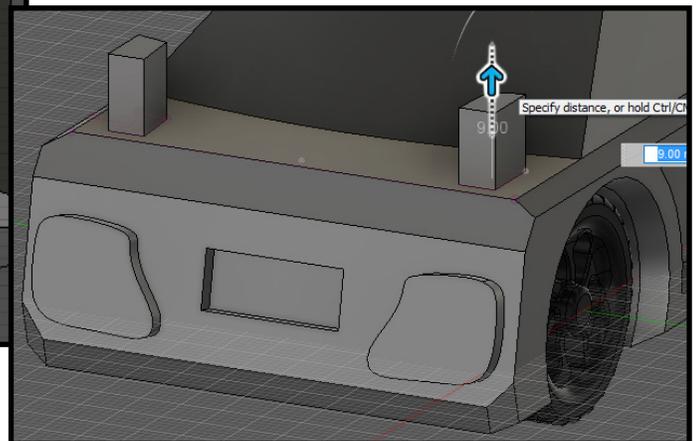
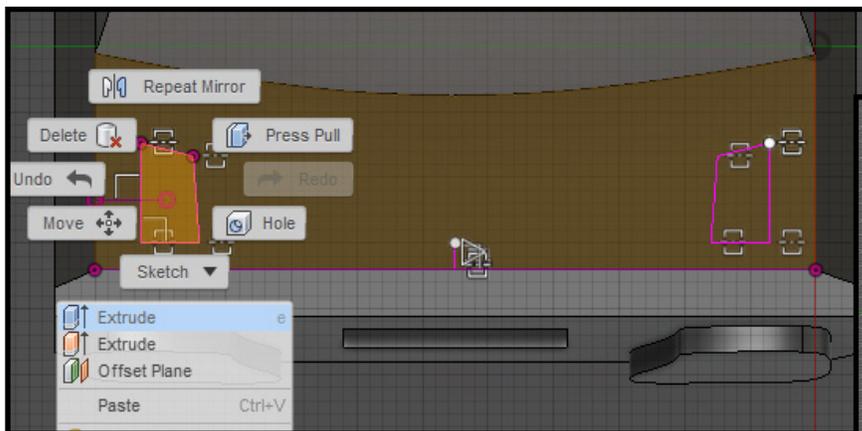
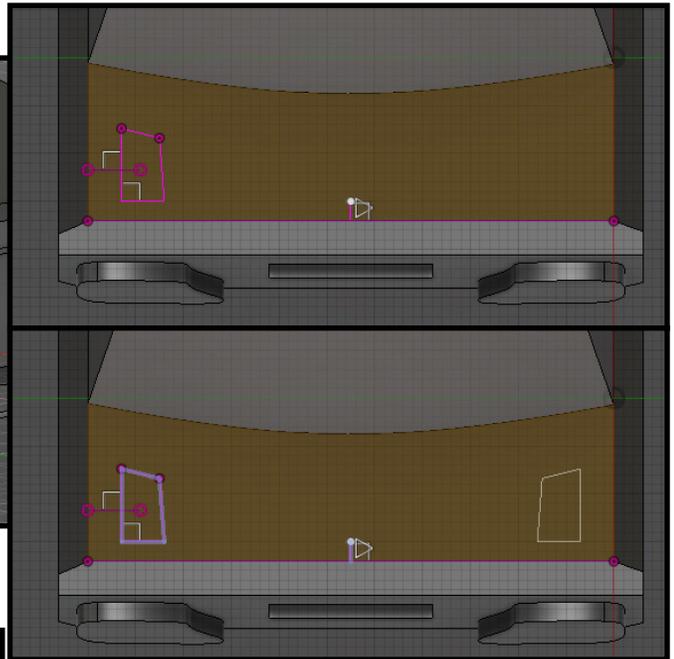
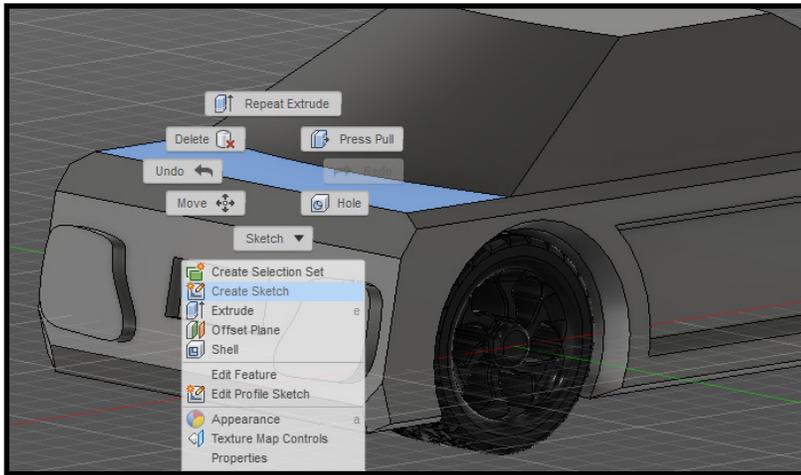


Note: This would be a good time to create a license plate inset if desired.

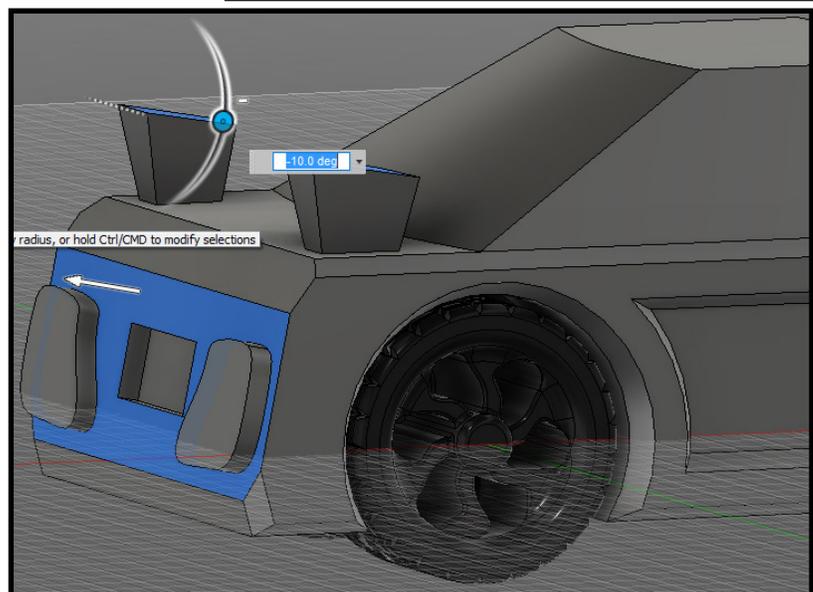


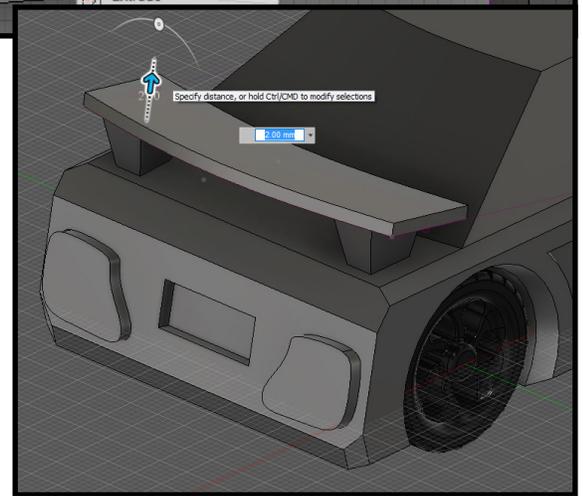
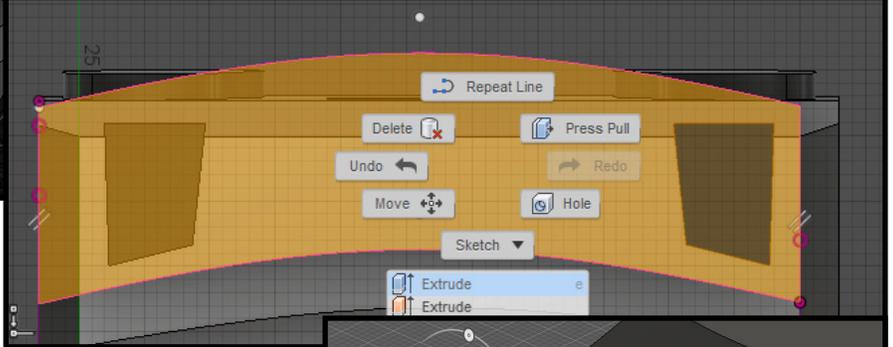
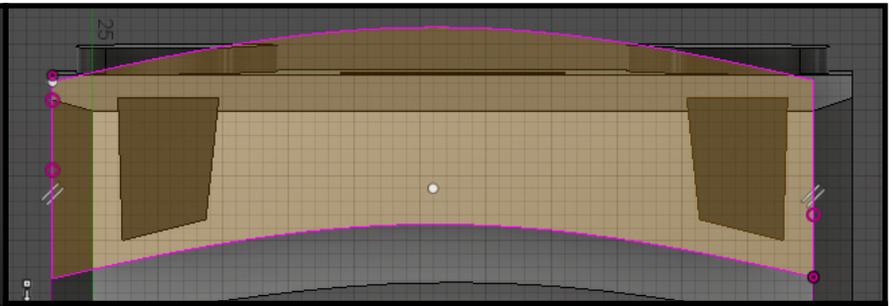
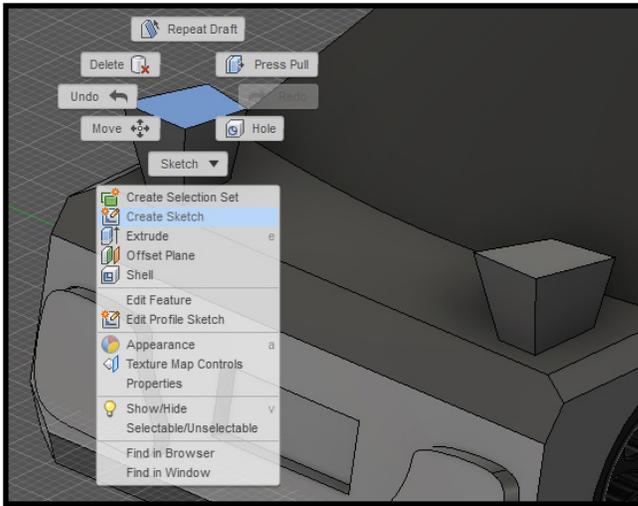
## STEP 9: CREATE SPOILER

• Use sketch tools and extrude to create spoiler. To do this, select the top back face of car, create new sketch, sketch profile to make a mount, mirror, and extrude.



• Use Draft tool on the spoiler mount top face to alter angle.





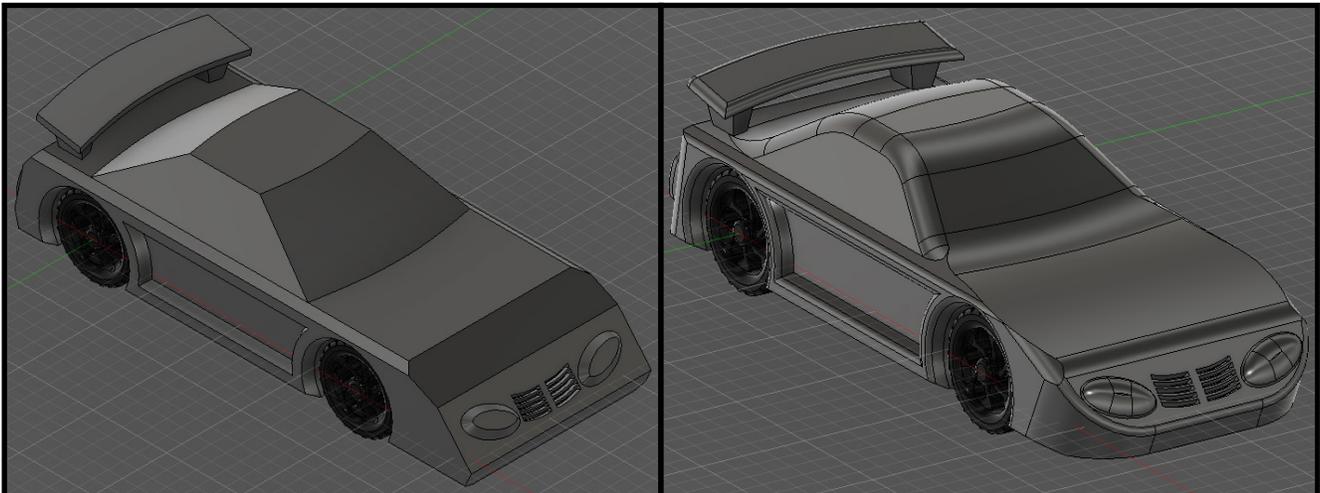
- Select the top face on spoiler mount and create sketch. Sketch spoiler profile and use mirror to keep symmetrical.

- Extrude spoiler profile. Angle if desired.

Note: To make spoiler double finned, extrude first spoiler fin as new body, copy and move above first spoiler fin.

## STEP 10: SASS UP YOUR CAR WITH TONS OF FILLETS!

Start using fillet tool to smooth out sharp edges as desired. Fillets make it hard to make complex changes to faces if it's curved, so be sure you're ready! Remember you can always go back in time by using the timeline to change anything.



**DESIGN YOUR OWN RIMS AT THE VERY END IF YOU DESIRE.**

**IF YOU'RE INTERESTED YOU CAN START OVER CUSTOMIZING ONE OF THE OTHER CAR BASE DESIGNS (TRUCK, SPORTS, SUV).**