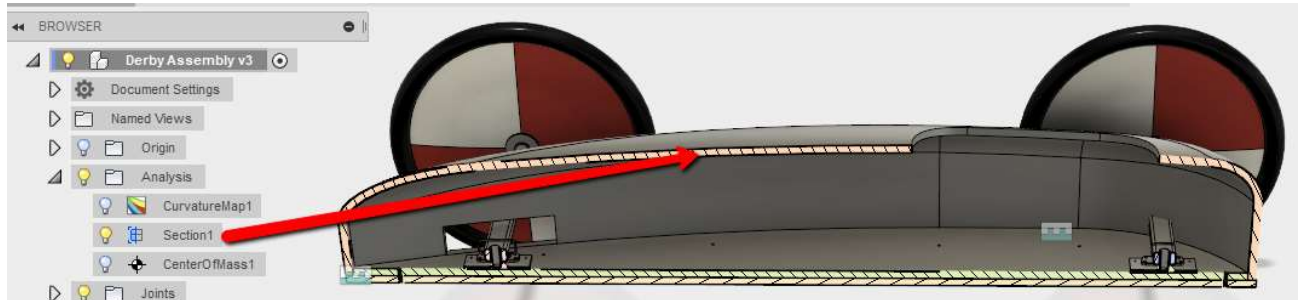


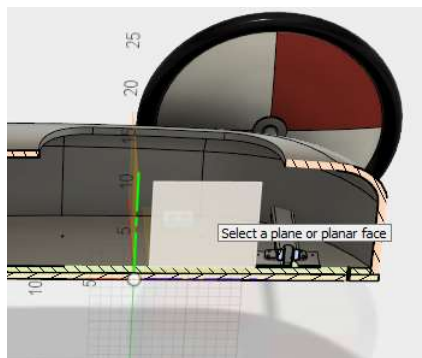
Creating and Using Forms

Exercise One: Create Seat Base

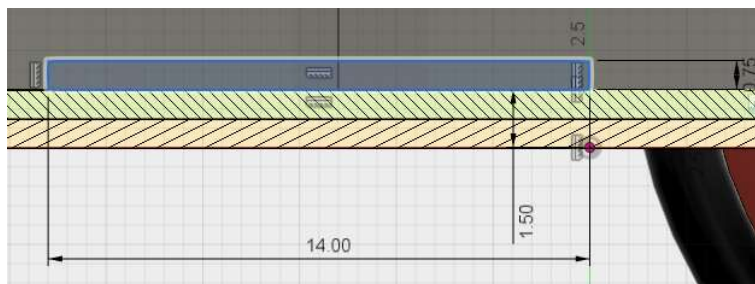
1. Turn on Section Analysis, that was created in the last session.



2. Start a new sketch and select the YZ plane for the sketch.



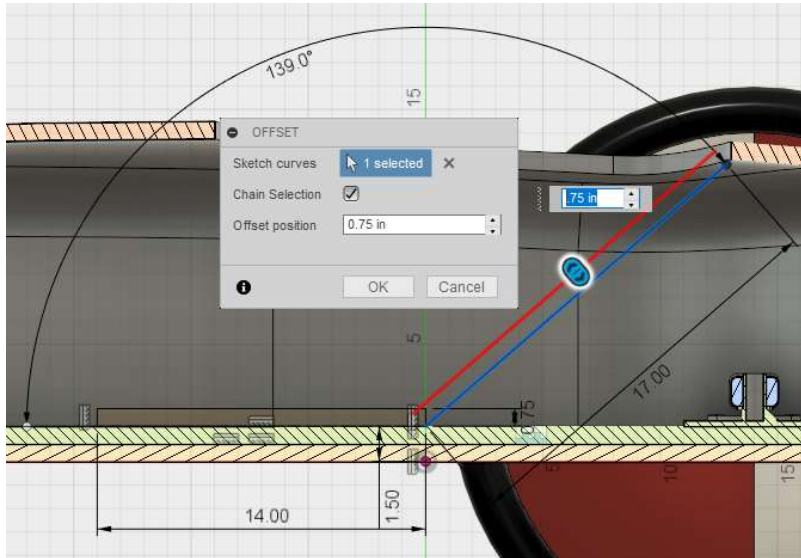
3. Create a rectangle 14 inches by .75 inches
4. Vertically constraint the center point to the lower right corner of the rectangle.



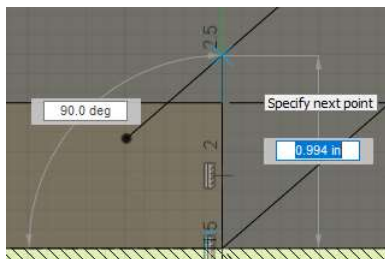
Creating and Using Forms

Exercise One: Create Seat Base

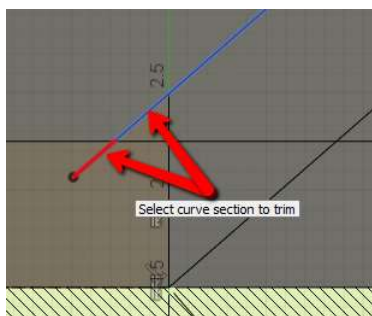
5. Create a line at a 139-degree angle.
6. Create an offset line .75 inches.



7. Create a vertical line from the bottom of the rectangle to the offset line.



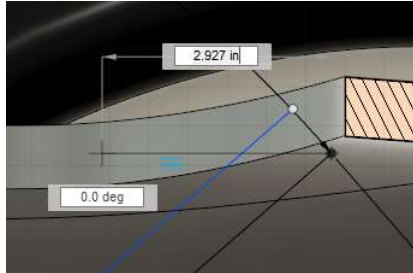
8. Trim the two segments of the offset line that extend past the vertical line that was just created.



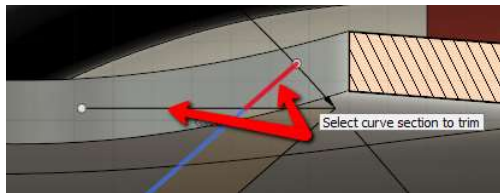
Creating and Using Forms

Exercise One: Create Seat Base

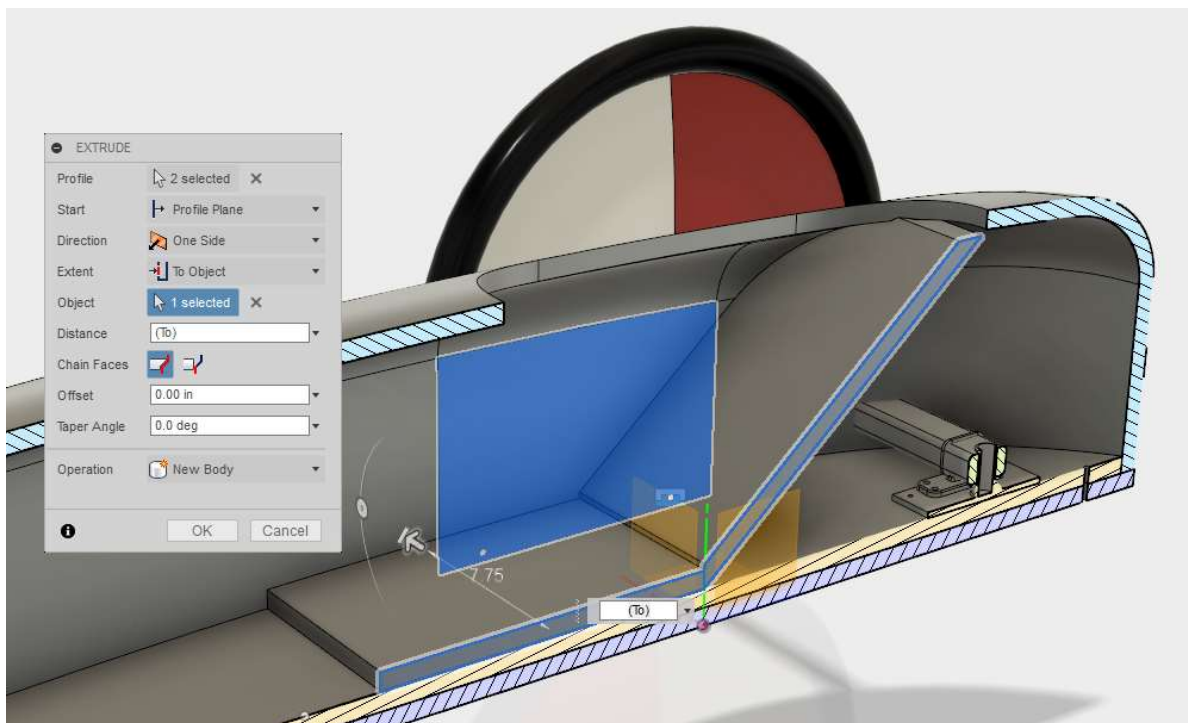
9. Draw a horizontal line from the top of the diagonal line that crosses over the top of the offset line.



10. Trim away the extensions of the offset line and the new horizontal line.



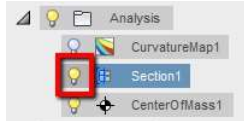
11. Start the extrude and select the two closed profiles.
12. Set distance to Object and Chain Faces to the Chain Faces option.
13. Select the flat wall on the inside of the fuselage.



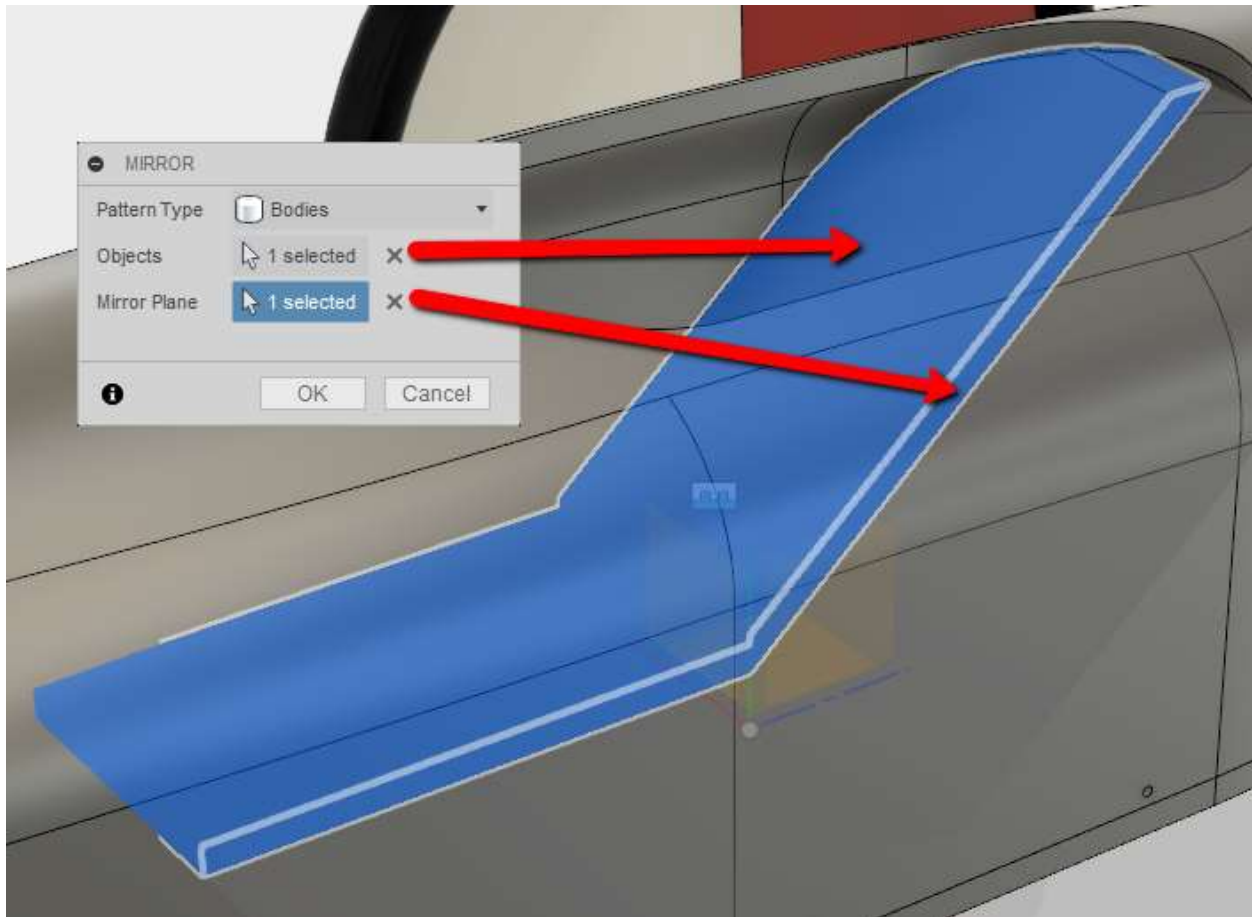
Creating and Using Forms

Exercise One: Create Seat Base

14. Turn off Section Analysis.



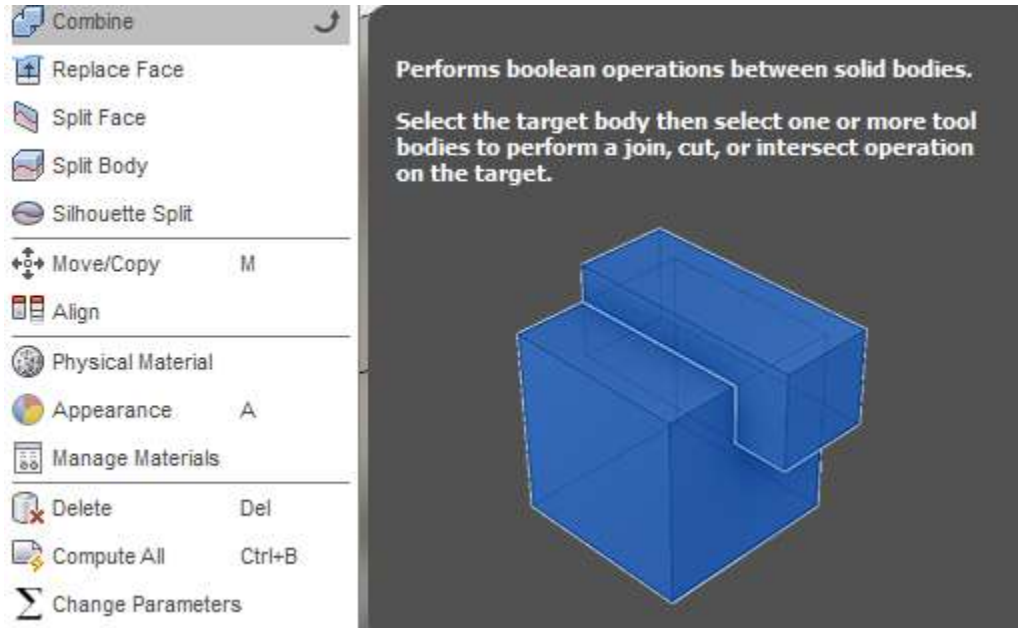
15. Mirror the newly extruded body to the profile face as the mirror plane.



Creating and Using Forms

Exercise One: Create Seat Base

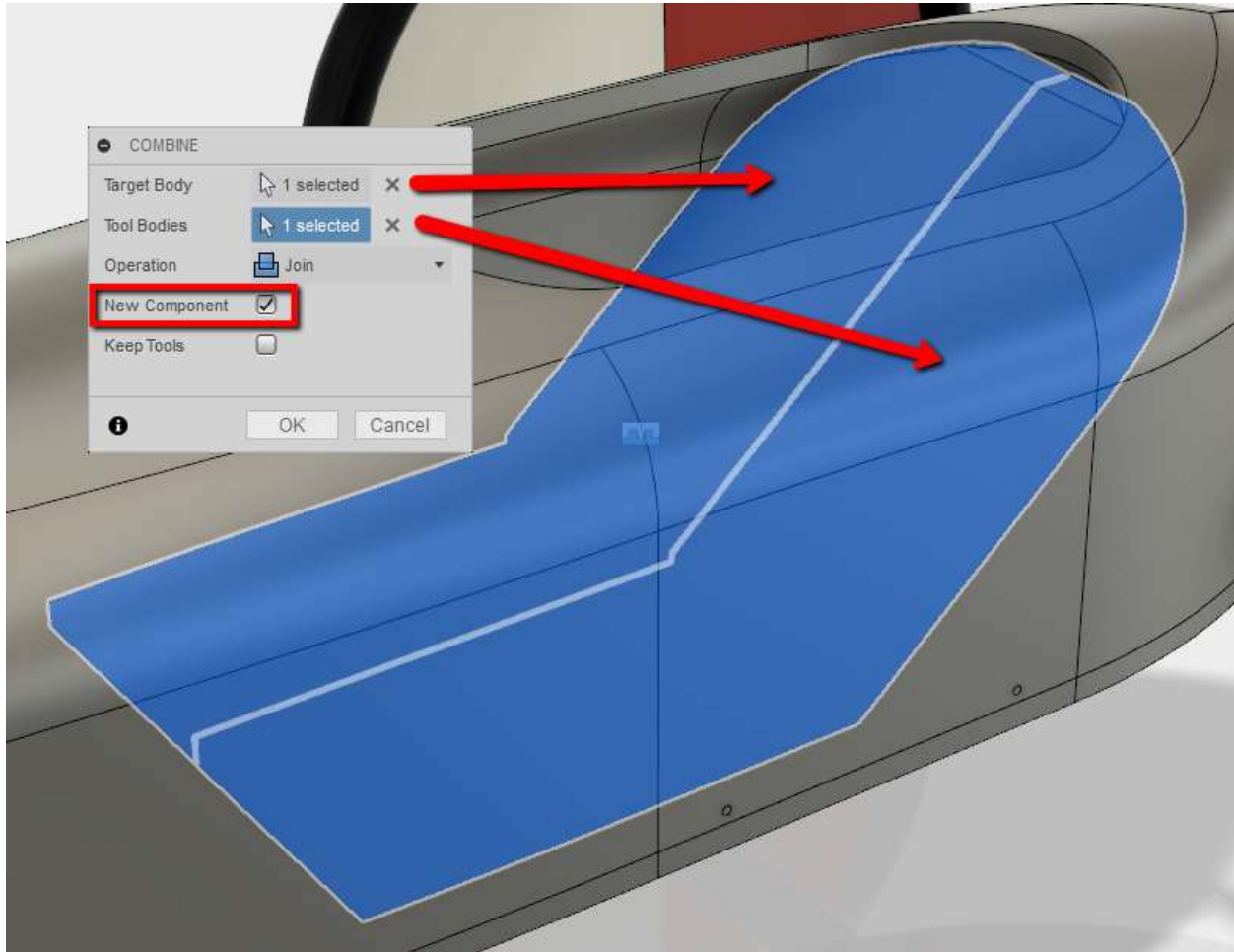
16. Go to Modify>Combine.



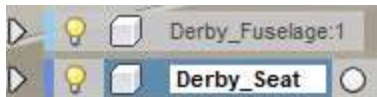
Creating and Using Forms

Exercise One: Create Seat Base

17. Combine the two sections of the seat, into a new component.



18. Rename the new component to Derby_Seat.



Creating and Using Forms

Exercise Two: Form Seat Cushions

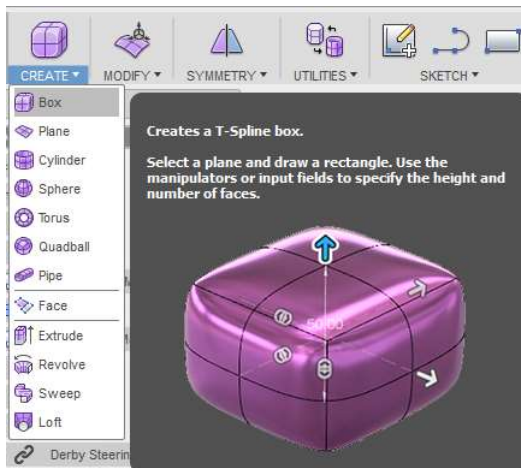
1. Select the derby_seat component.
2. Right click and select isolate.



3. Start forms, from the Create Forms on the tool panel.



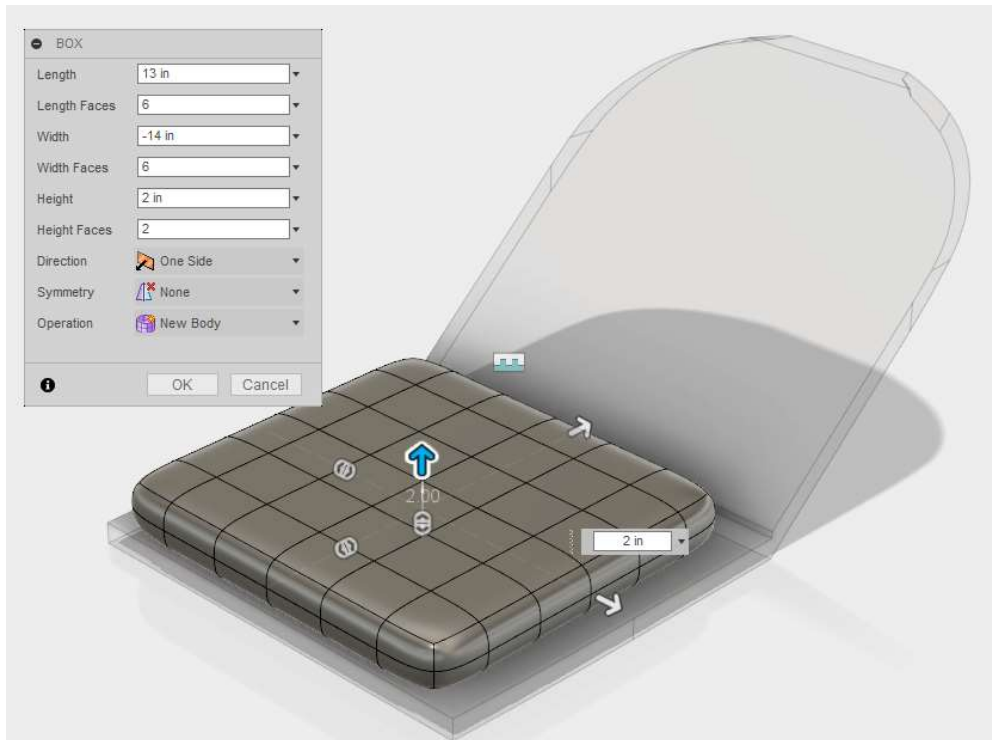
4. Create a box.



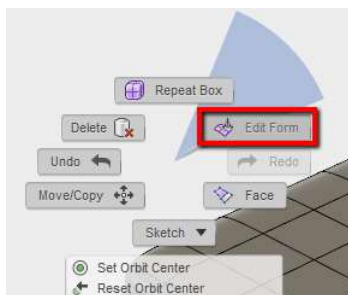
Creating and Using Forms

Exercise Two: Form Seat Cushions

5. Select the top of the base of the derby_seat.
6. Create the box with the parameters shown below.



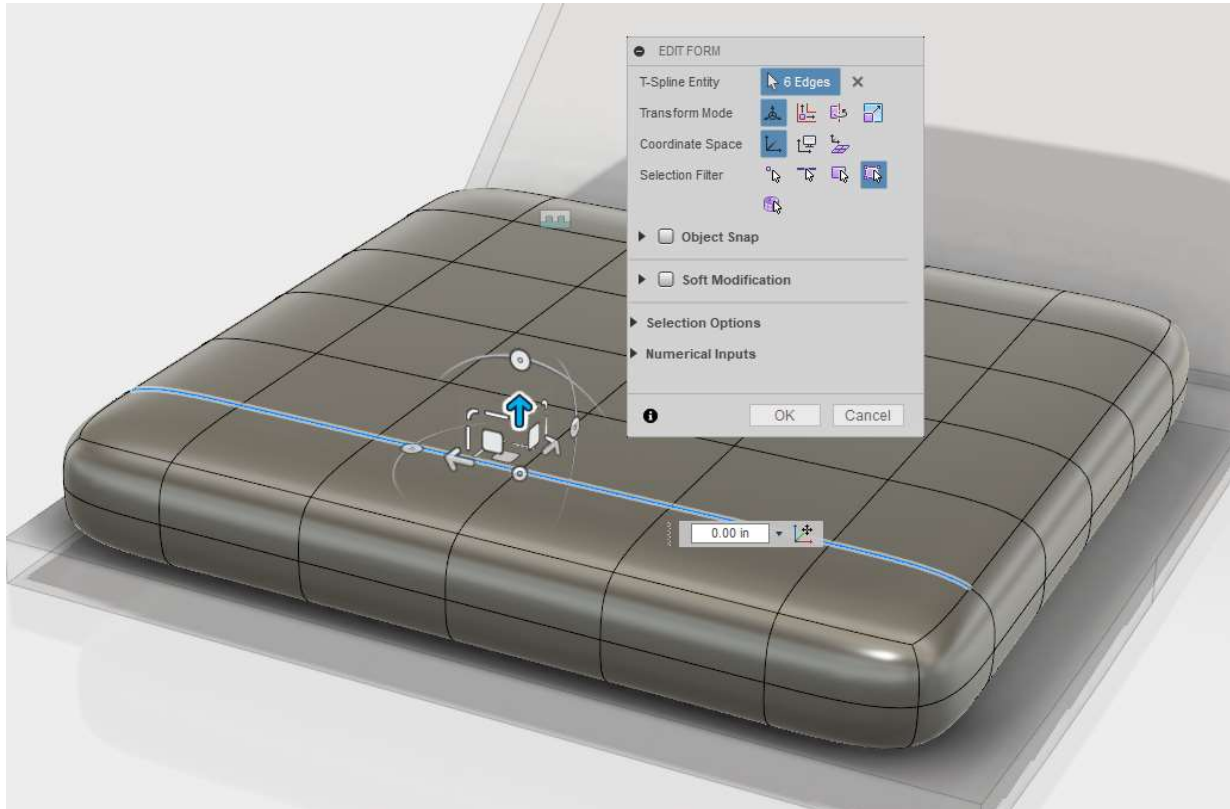
7. After completing the box, right click in the design window and select Edit Form.



Creating and Using Forms

Exercise Two: Form Seat Cushions

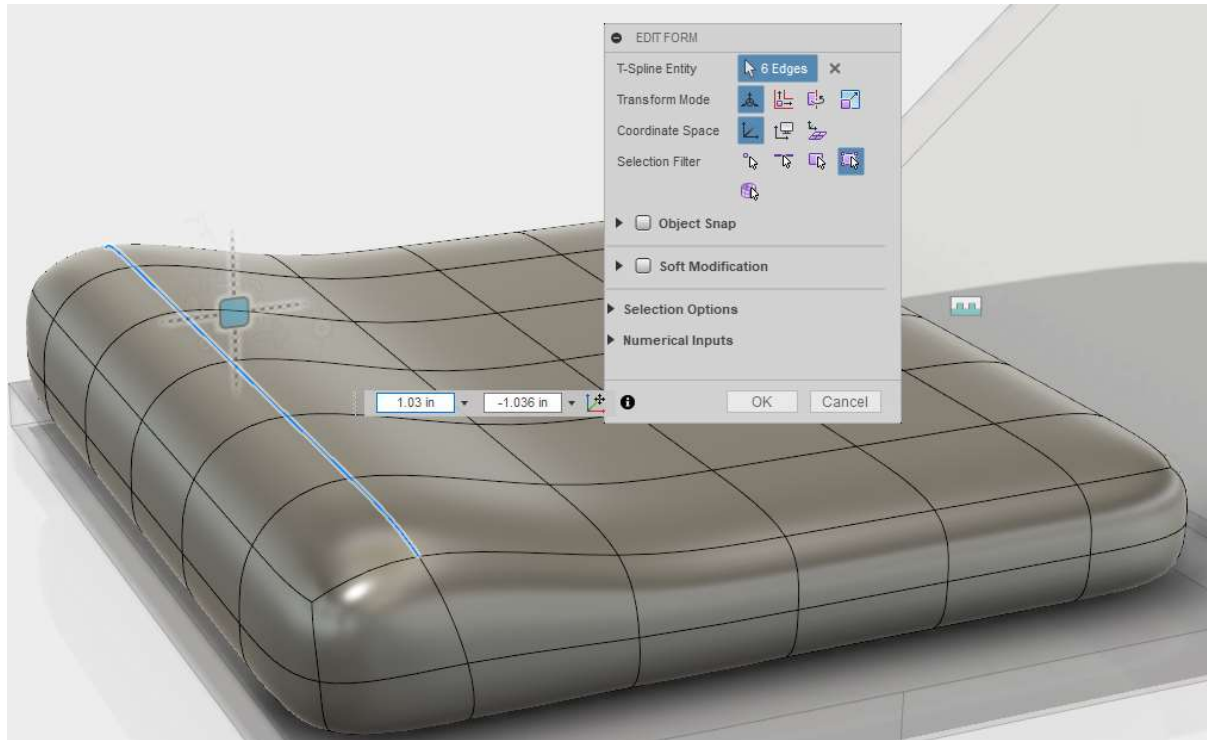
8. Select the top edges towards the front of the box.



Creating and Using Forms

Exercise Two: Form Seat Cushions

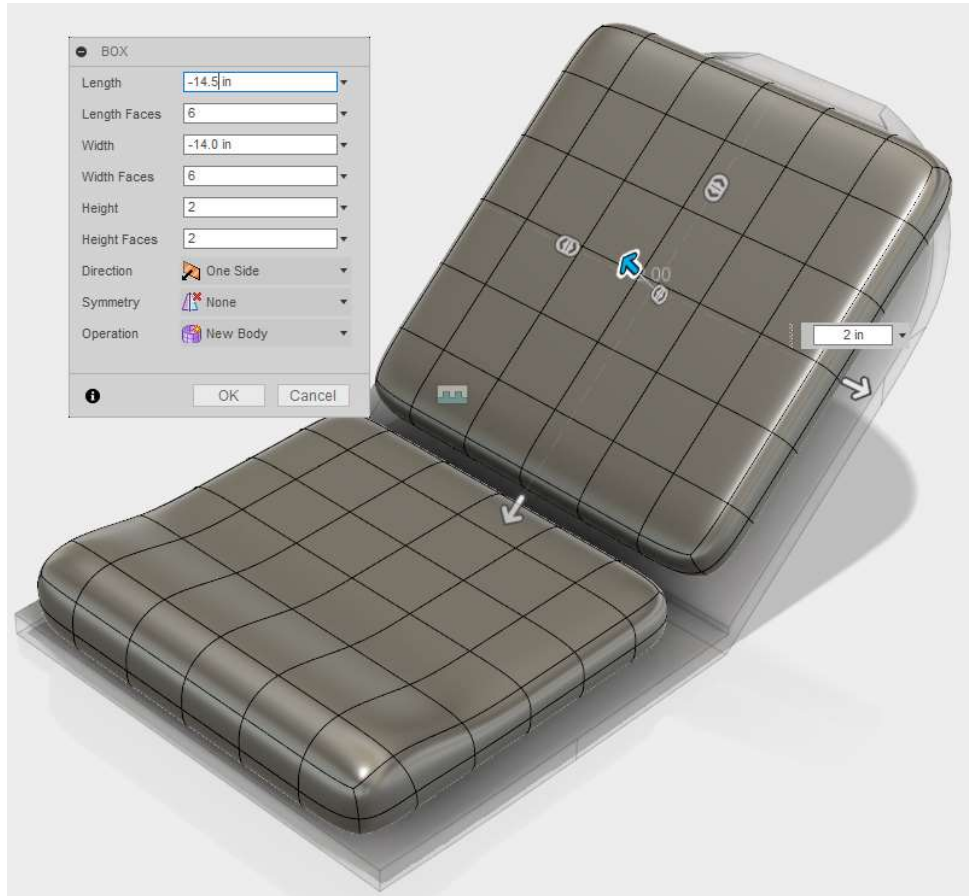
9. Grab the YZ move icon and move upwards and towards the front roughly 1 inch.



Creating and Using Forms

Exercise Two: Form Seat Cushions

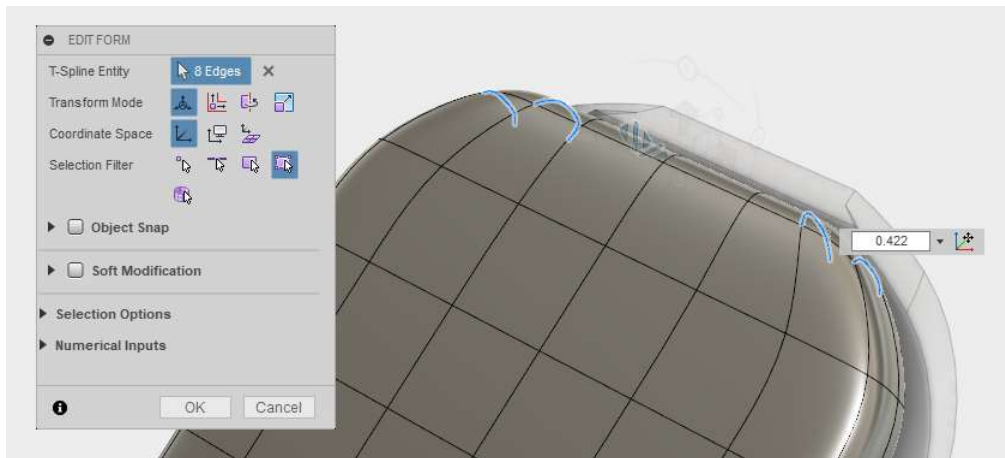
10. While still in the “form” command state, create another box on the back of the seat.



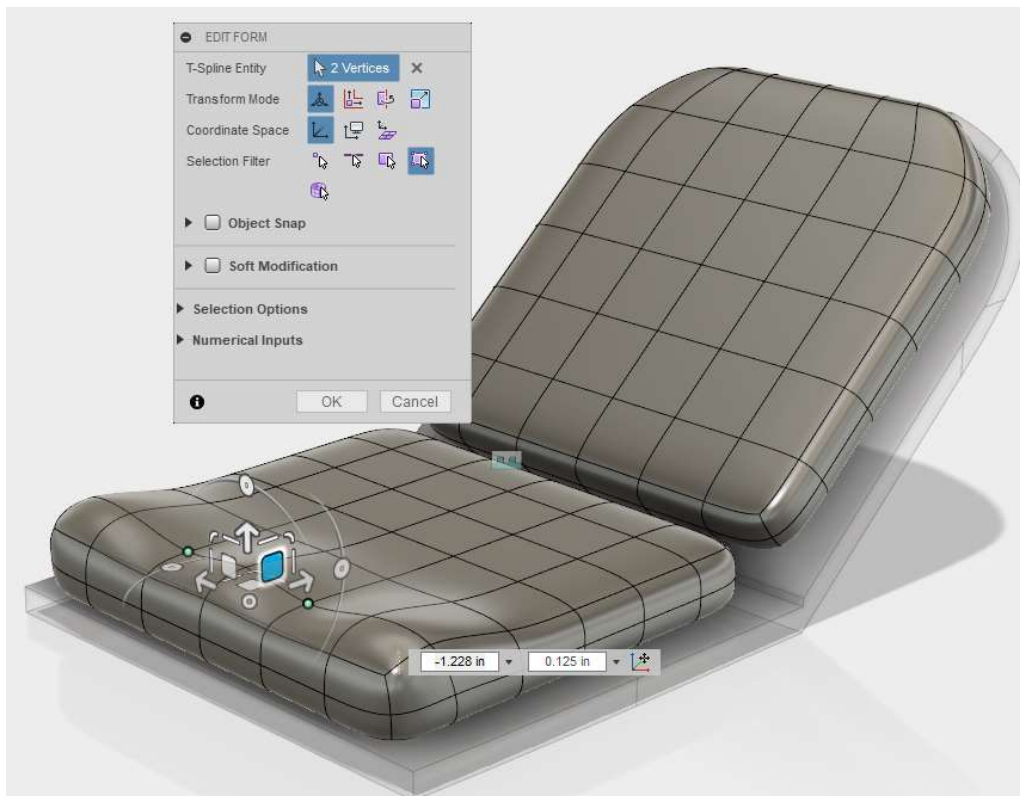
Creating and Using Forms

Exercise Two: Form Seat Cushions

11. Right click and select edit form.
12. Select the eight outside edges at the top of the new cushion.
13. Use the X scale icon to draw in the top of the cushion.



14. While still in edit form, select the two vertices shown below
15. Move them down using the YZ move icon.



Creating and Using Forms

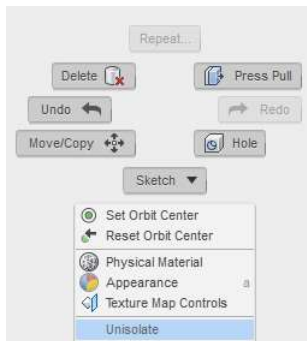
Exercise Two: Form Seat Cushions

16. Hit OK or Cancel to end edit form.
17. Select Finish Form on the far right of the toolbar.

The result will look like the image below.

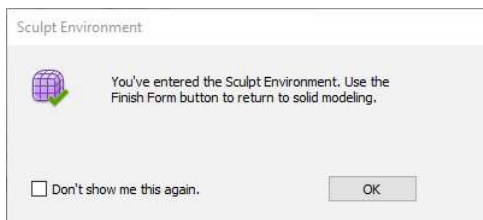


18. Unisolate to display all bodies and components.



After all objects are displayed, the top seat cushion may be going into the fuselage.

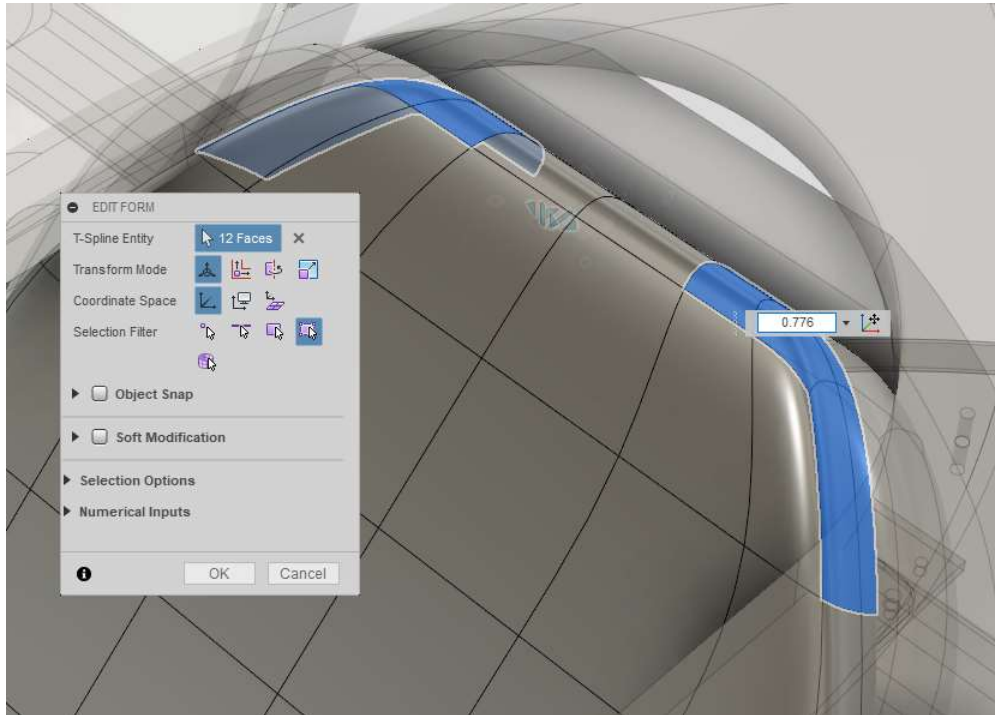
19. Edit the form that was being used at the history line.
20. Click OK to enter the sculpt environment.



Creating and Using Forms

Exercise Two: Form Seat Cushions

21. Select the faces shown below and scale them in the X direction only.



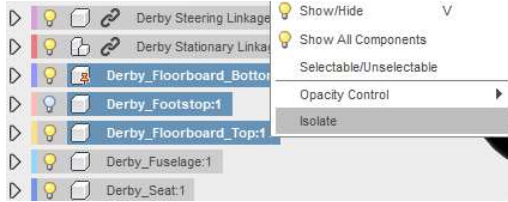
The result should have the seat just to the inside of the fuselage opening.



Creating and Using Forms

Exercise Three: Applying Materials and Appearances

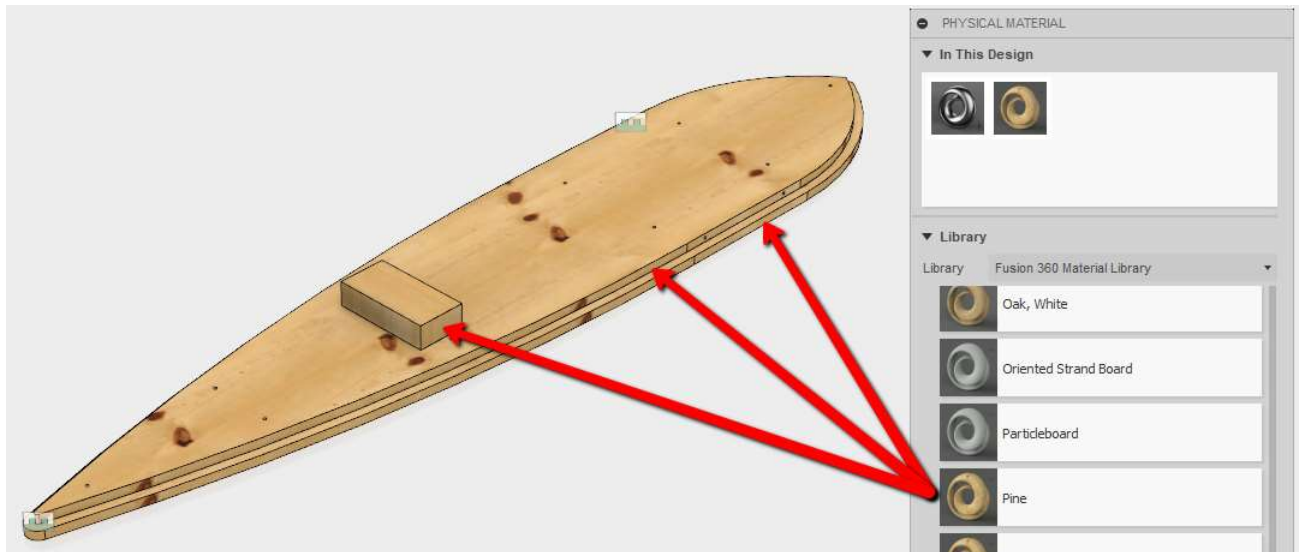
1. Select the two derby_floors and the derby_footstop components and isolate them.



2. Right click in the design window and select Physical Material.



3. Go to the Wood section and drag Pine to each of the components.



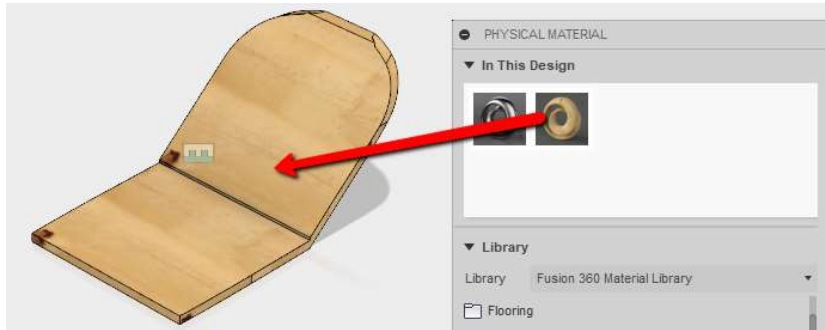
4. Right click in the design window and unisolate all bodies and components.
5. Select the new component derby_seat and isolate it



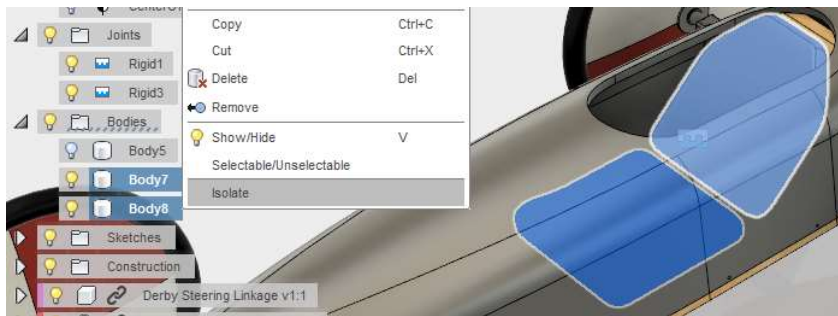
Creating and Using Forms

Exercise Three: Applying Materials and Appearances

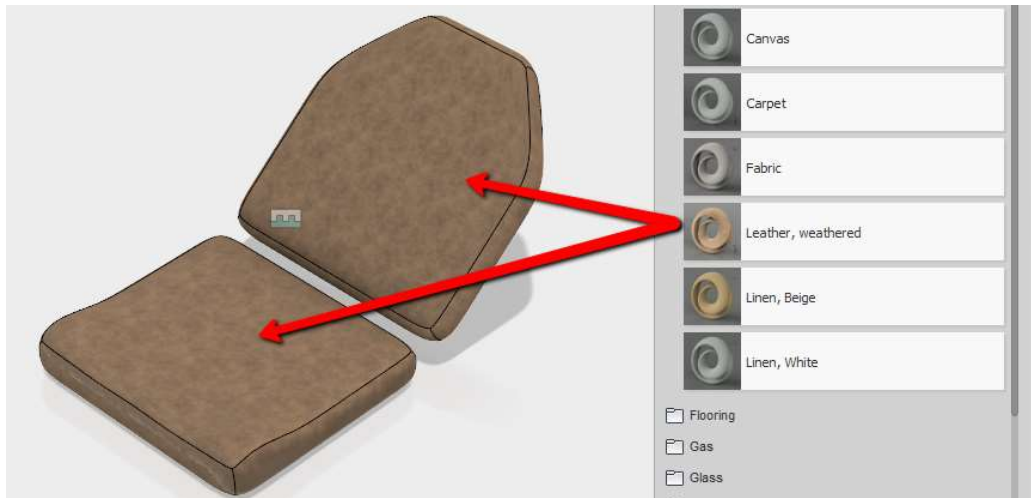
6. Right click in the design window and select Physical Material.
7. Drag the Pine material already in the design to the derby_seat



8. Right click in the design window and unisolate all bodies and components.
9. Select the bodies for the seat cushions and isolate them.



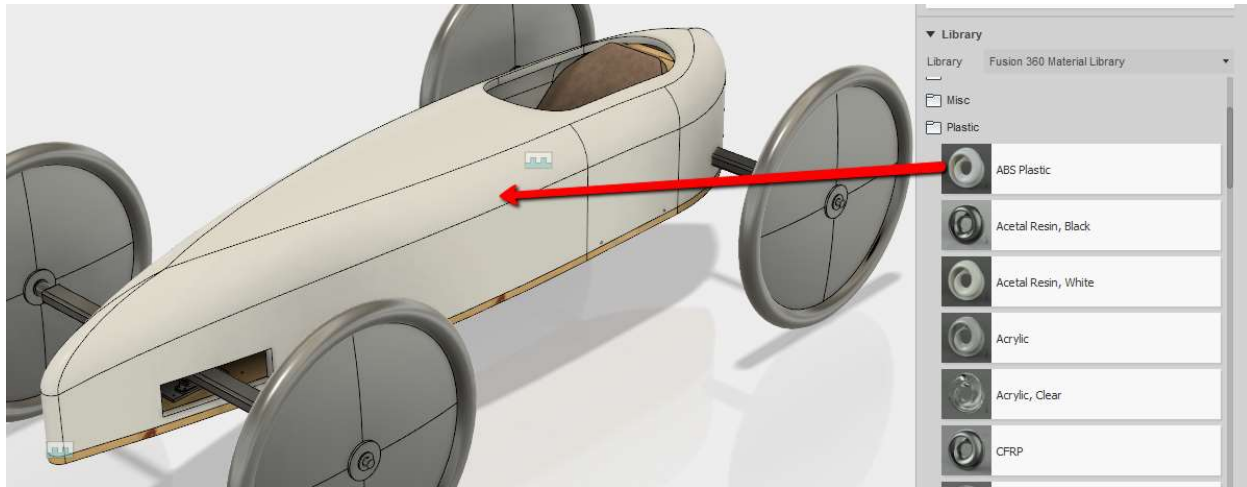
10. Go to Fabric and apply Leather, weathered to the cushions.



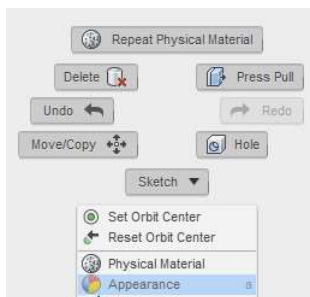
Creating and Using Forms

Exercise Three: Applying Materials and Appearances

11. Right click in the design window and unisolate all bodies and components.
12. Right click in the design window and select Physical Material.
13. Go to the Plastics and apply ABS Plastic to the derby_fuselage.



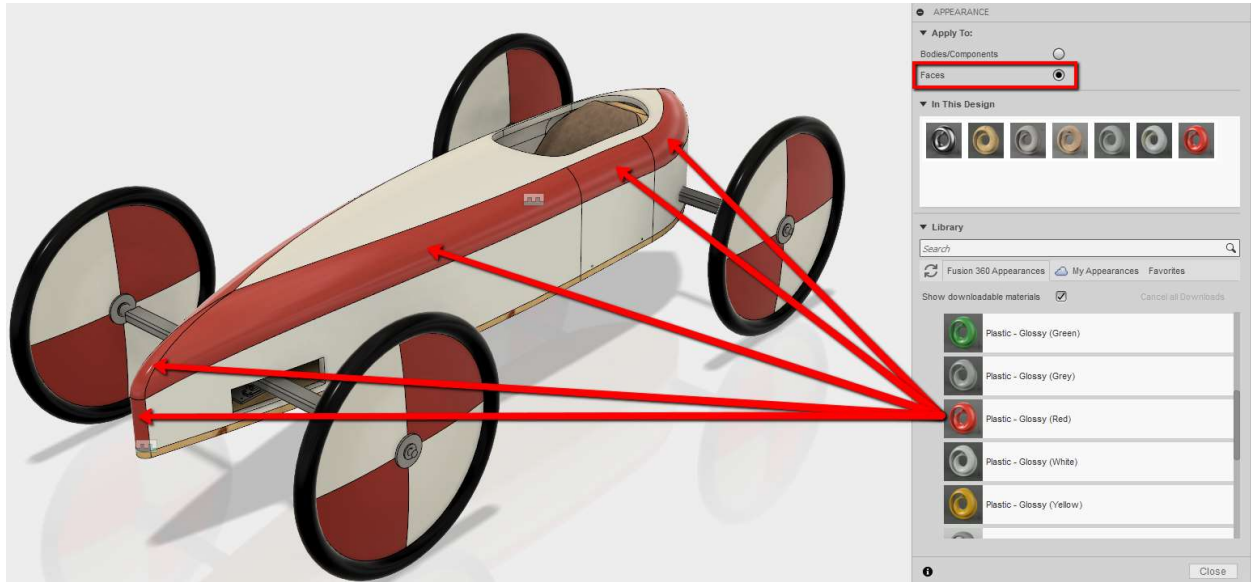
14. Close the material palette.
15. Right click in the design window and select Appearances.



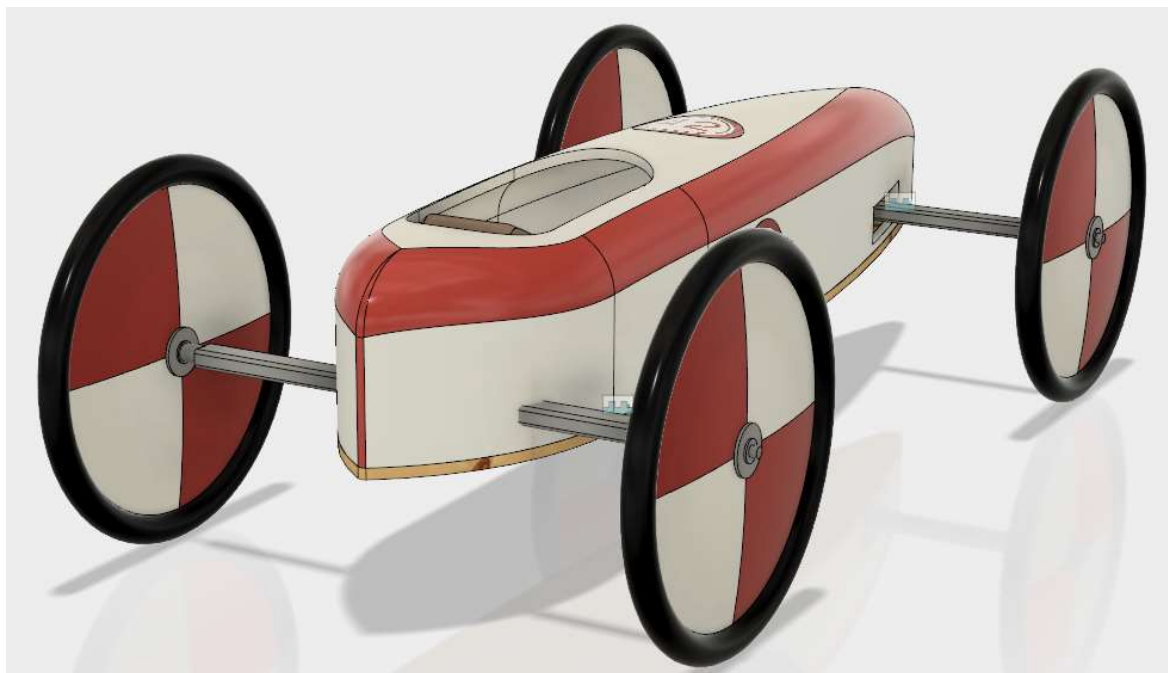
Creating and Using Forms

Exercise Three: Applying Materials and Appearances

16. Apply the Plastic>Opaque>Plastic – Glossy (Red) to the faces shown below.



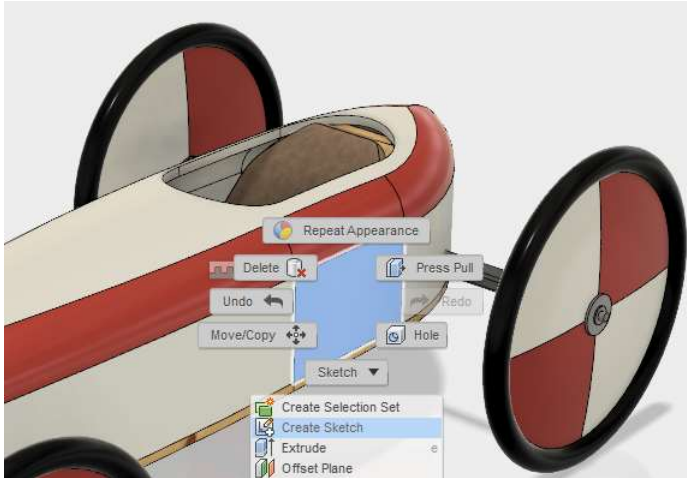
17. Apply the appearance to the other side and back to complete the appearance.



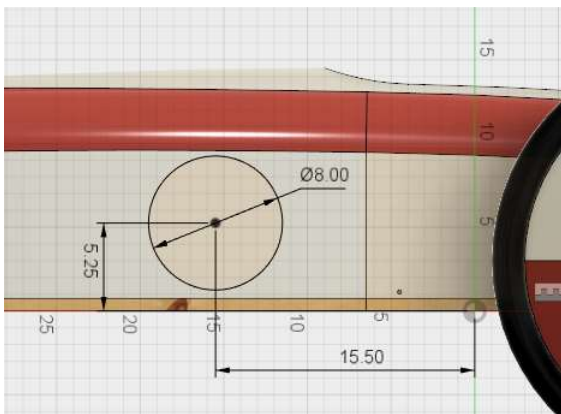
Creating and Using Forms

Exercise Four: Applying Decals

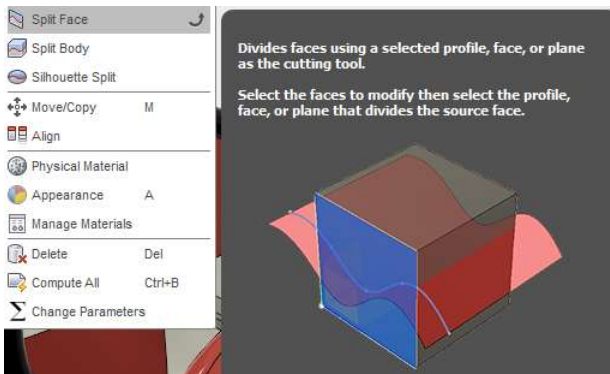
1. Right click on the flat side of the derby_fuselage and select Create Sketch.



2. Create an 8 inch circle using the following dimensions from the center point.



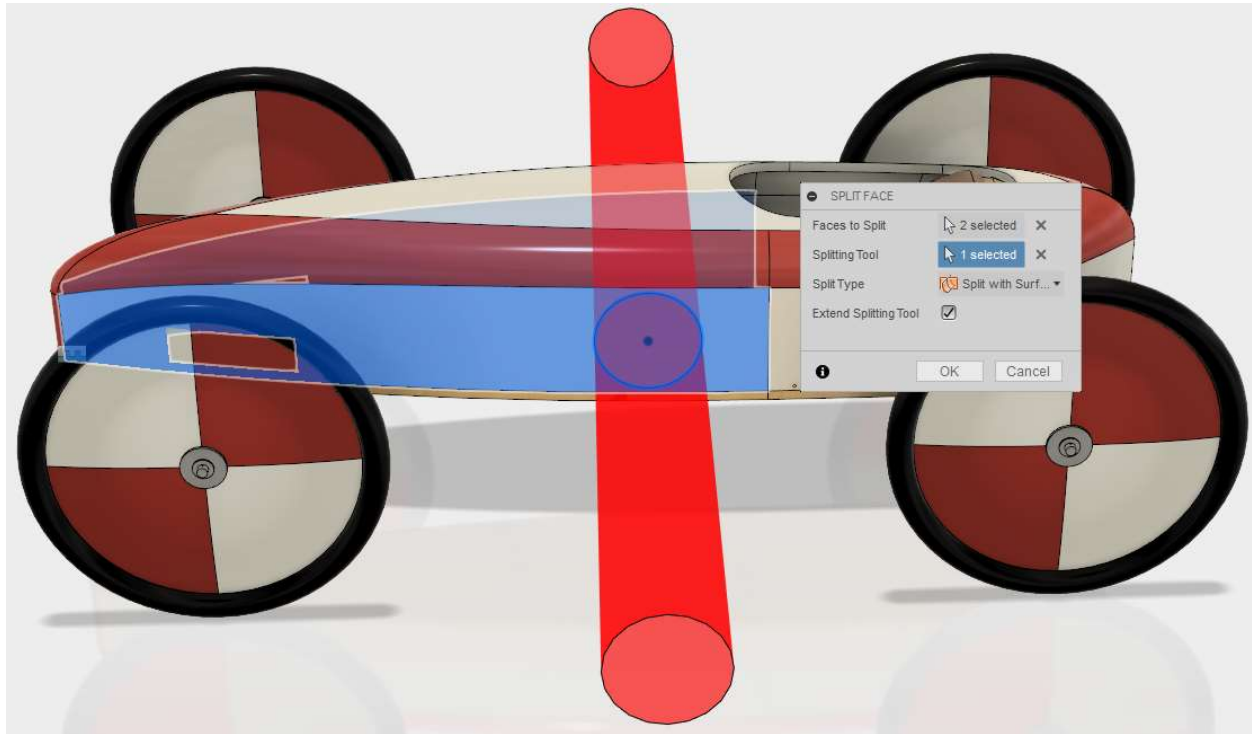
3. Finish the sketch.
4. Go to Modify>Split Face.



Creating and Using Forms

Exercise Four: Applying Decals

5. Select the two side curved faces in the front to be split.
6. Select the circle for the splitting edge.

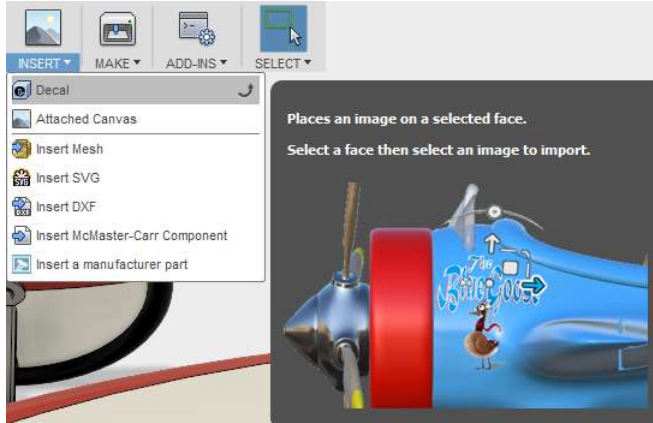


This will split the surfaces into separate surfaces.

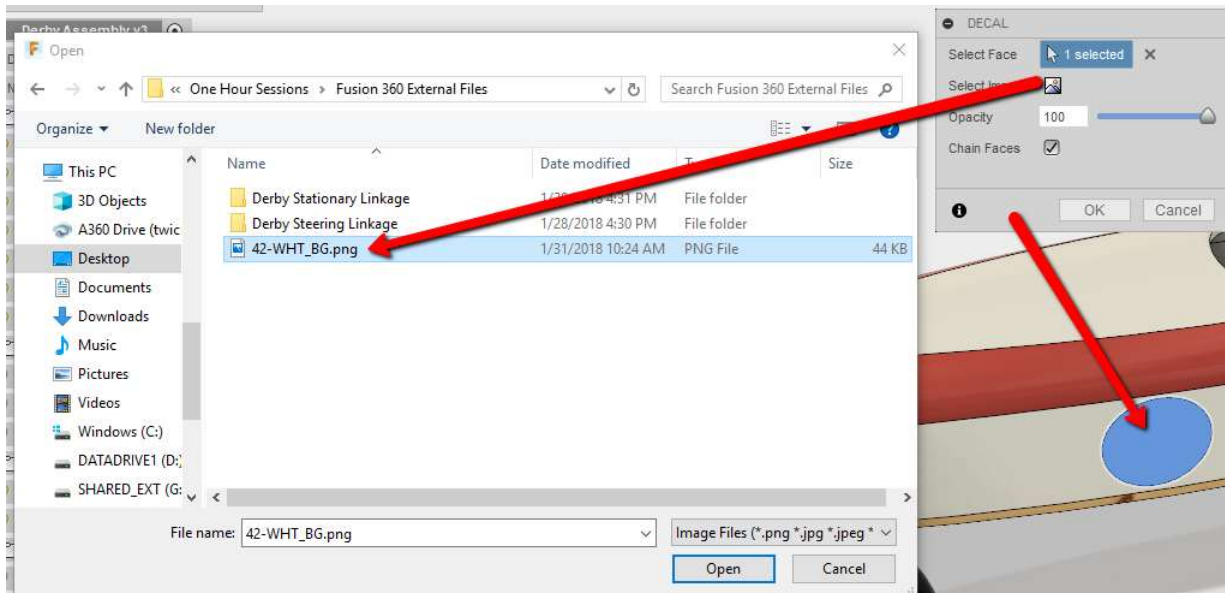
Creating and Using Forms

Exercise Four: Applying Decals

7. Go to Insert>Decal.



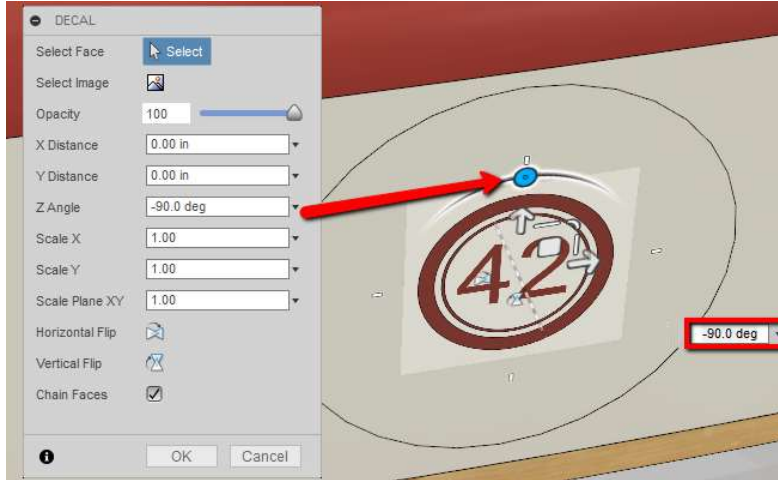
8. Browse to the extracted folder and select the 42-WHT_BG.png.



Creating and Using Forms

Exercise Four: Applying Decals

9. Rotate in 10-degree increments the decal to get the correct orientation.



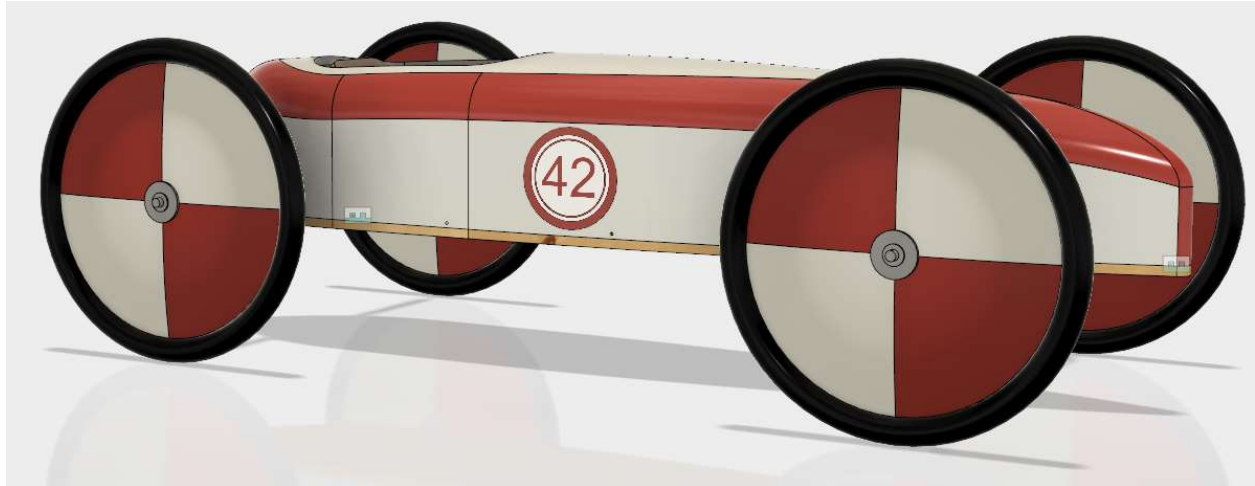
10. Resize and move the decal to fit the circular face.
11. Uncheck Chain Faces.



Creating and Using Forms

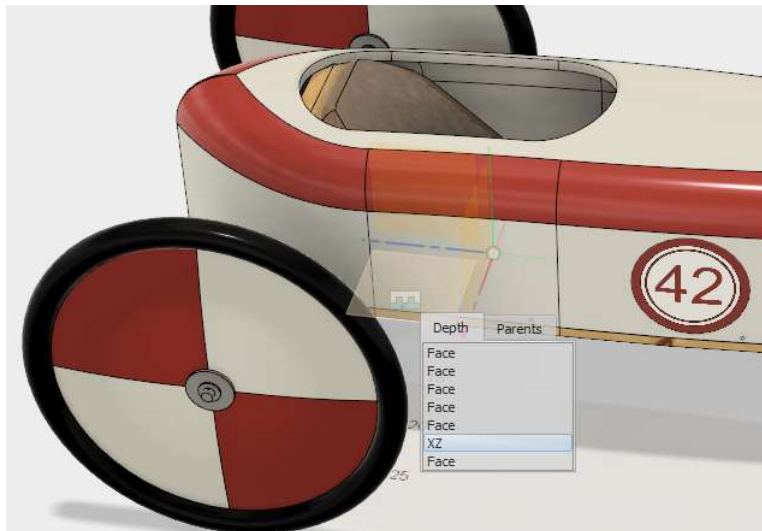
Exercise Four: Applying Decals

12. Repeat the process on the circular face on the other side.



13. Create a new sketch.

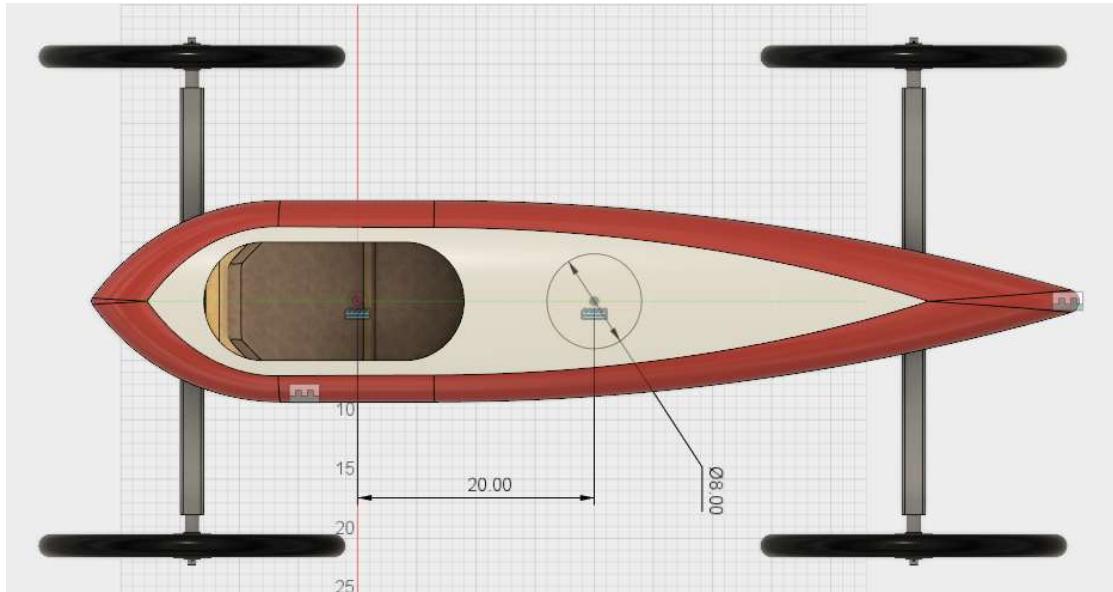
14. Pick and hold to get the list, in order to select the XZ plane for the new sketch.



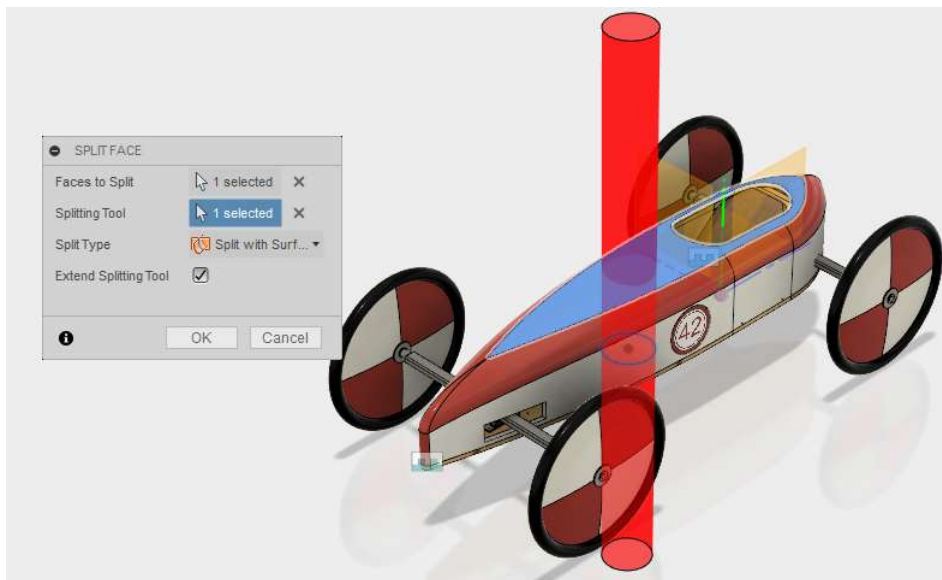
Creating and Using Forms

Exercise Four: Applying Decals

15. Create an 8 inch circle, aligned with and 20 inches from the center point.



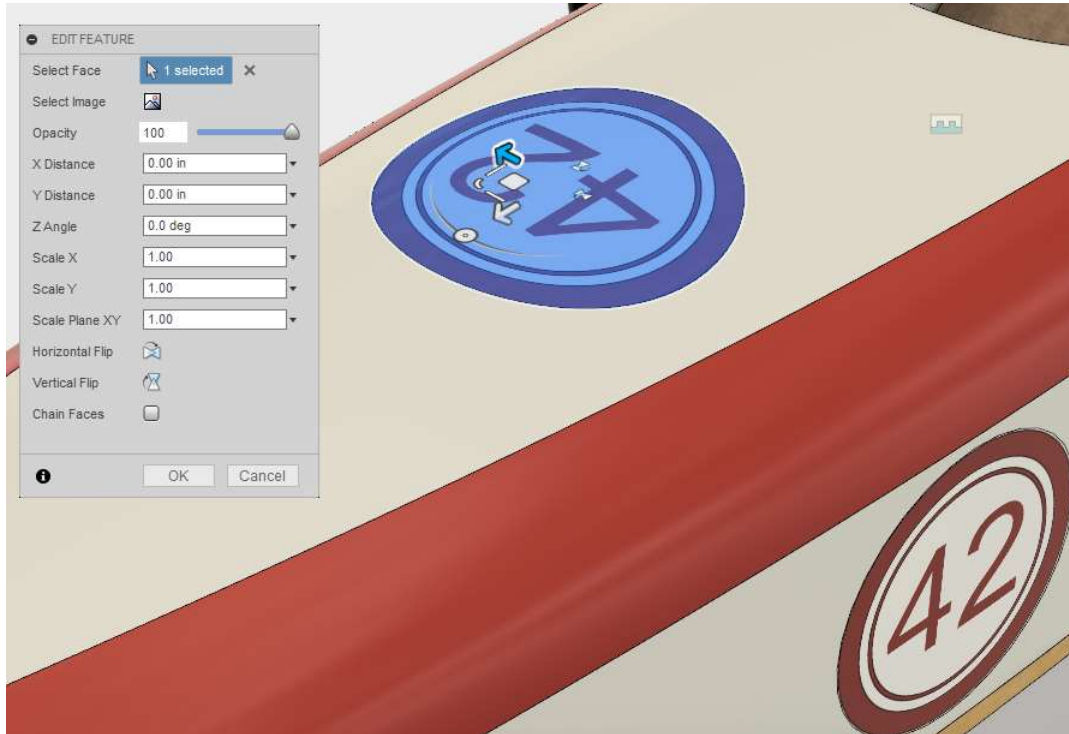
16. Split the top face with the circle.



Creating and Using Forms

Exercise Four: Applying Decals

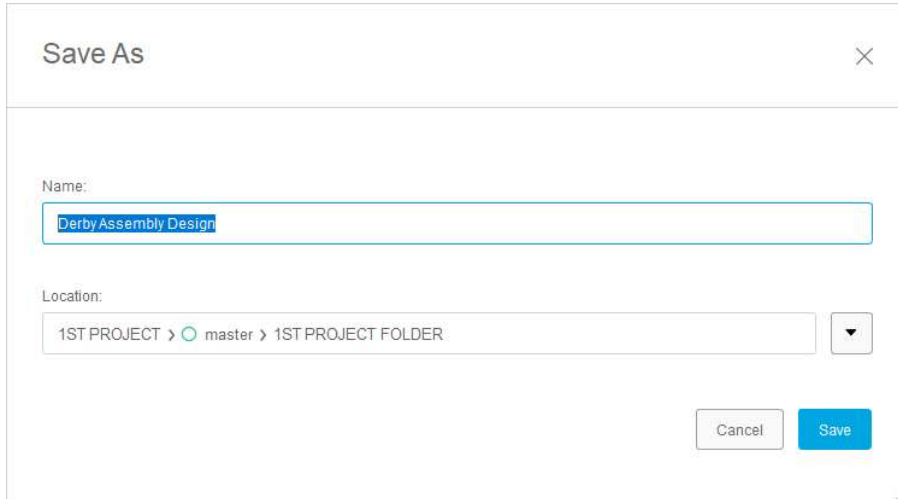
17. Apply the decal with the same process as the sides.



Creating and Using Forms

Exercise Five: Data Maintenance

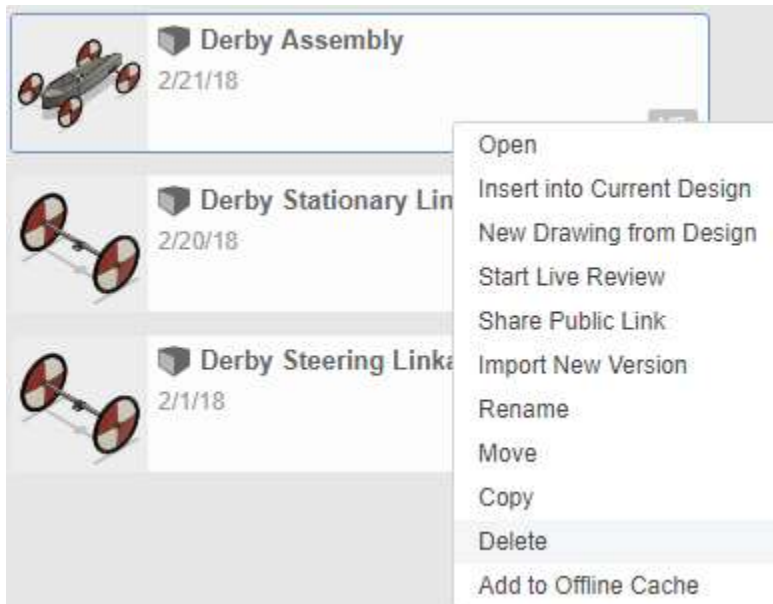
1. Save As the design and name it Derby Assembly Design.



Notice the history is still in the new design.



2. Right click on Derby Assembly and notice you can delete it.



3. Hit escape to get rid of the menu.

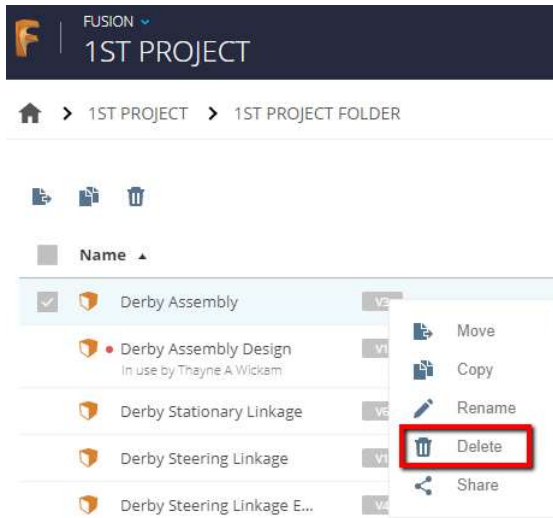
Creating and Using Forms

Exercise Five: Data Maintenance

4. Open the cloud through the data panel by selecting your name.



5. Go to 1st Project>1st Project Folder
6. Delete the Derby Assembly file.



7. It will prompt you about the deletion.
8. Click on delete to remove the file.

Delete File

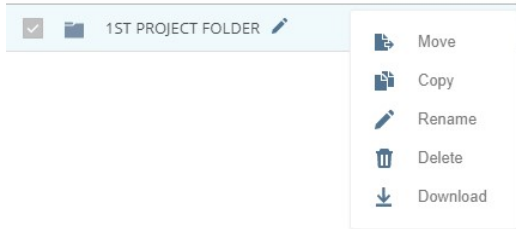
Are you sure you want to delete Derby Assembly?



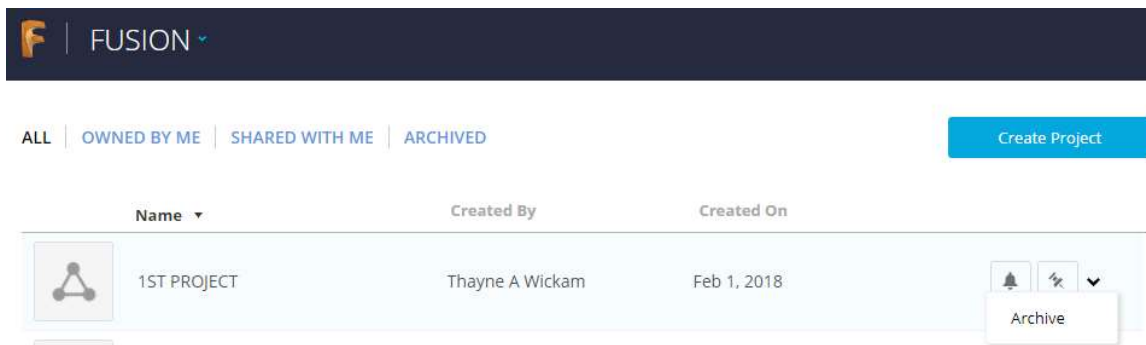
Creating and Using Forms

Exercise Five: Data Maintenance

Additional options are to delete the folder and all files within it.



Projects can be Archived to remove them from the data panel.



Archived data can be restored or deleted if needed.

