TinkerCAD Tutorial 2 - Advanced techniques

1. To begin go to the Basic shapes menu and select the Paraboloid shape and place it in your workplane.

2. Next take a cube and place it directly over the Paraboloid. Change the cube to the hole setting and move it up so that it only cuts off the top of the Paraboloid.
3. Group the two objects together. As you can see this looks like an upside-down cup. To rotate it, select the object and press the arrows. Spin it until it is 180 degrees. This is the beginning of our cup.
4. Next grab the top square to drag it to make your cup taller. Then grab the corner and press Shift and Alt. This will resize the whole object proportionately.
5. To make the inside of our cup hollow, copy the object by pressing CTRL-D on your keyboard. Then change it to the hole setting and size it using Shift-Alt so that it is smaller than the original cup and just above the cup like shown below.
6. Next add letters to the cup. Place a U, N, C, and W on the cup. Then create another copy of the cup and make it larger than the original cup.
7. Next, select a cube from the basic shapes menu and place it over the cup. Select both the cube and cup and group the objects. Now make the cube transparent via hole. Select the cube and the letters and group the objects again. Now the letters will wrap around the cup.
8. Lastly, align the letters so that they are in the middle of our cup. Select the letters and the cup. Then press the align button next to the ungroup button. Finally select the middle button so that it is directly in the center of the cup.
9. Now make the handle. Go to the Basic shapes menu and select a torus. Place it within the workspace and size it. Next rotate it so that it sits perpendicular to the cup.
10. Select the whole cup plus the handle and group the objects. Now you have a complete personalized UNCW mug.
11. To export your project to have it printed, go to export at the top of the page and select Download. Next select the file format you would like to use. This will download your project so that you can save it, email it, and print it. If you do not have access to a 3D printer you can go to 3D print and select a company that will print it for you.
12. Lastly, you can import stl, obj, and svg files from other sources and edit them using TinkerCAD. Using these methods, you can create and print any 3D object you make using TinkerCAD.