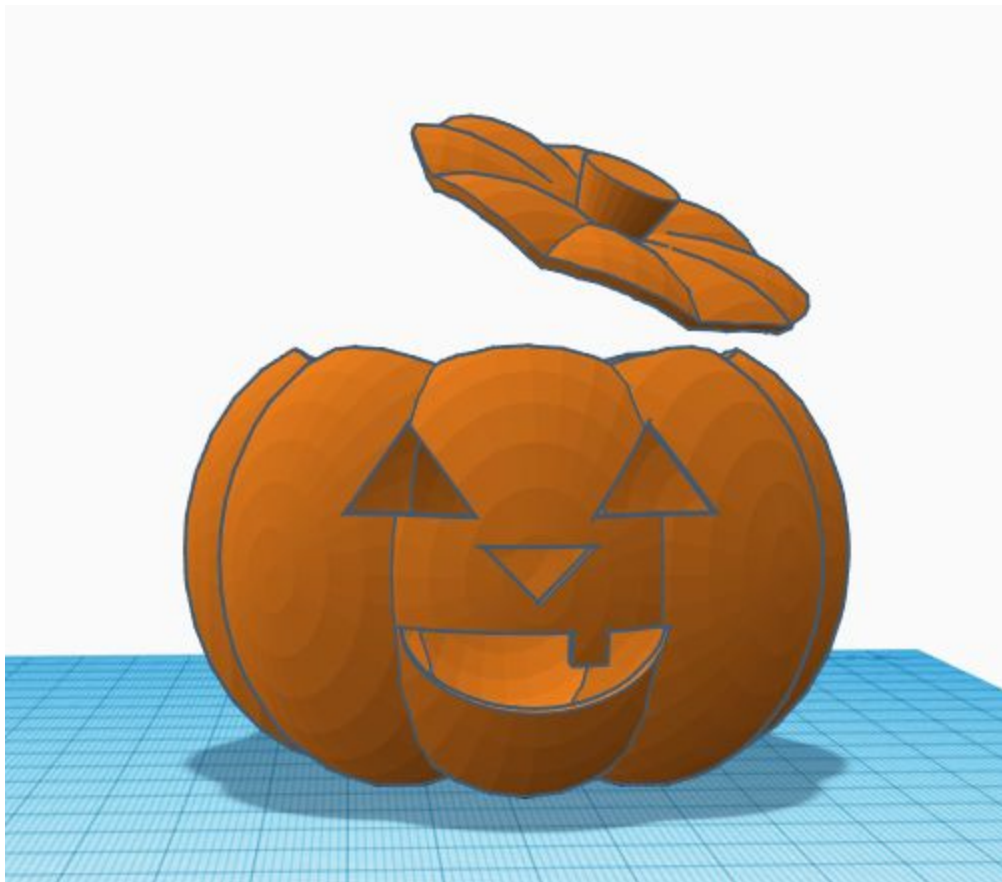# How to create and carve a 3D pumpkin in Tinkercad
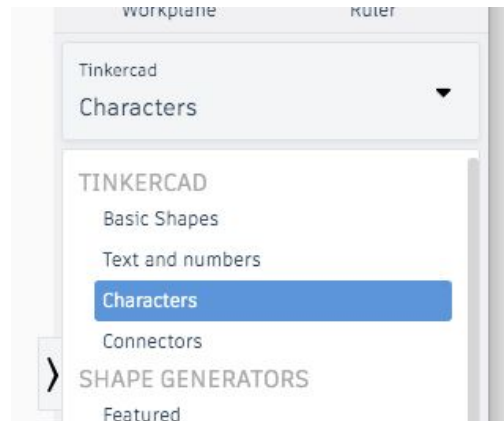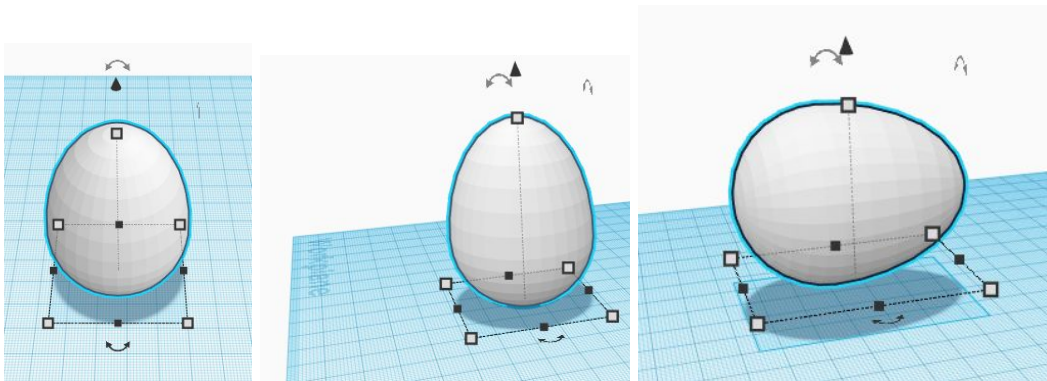
Creating A Pumpkin
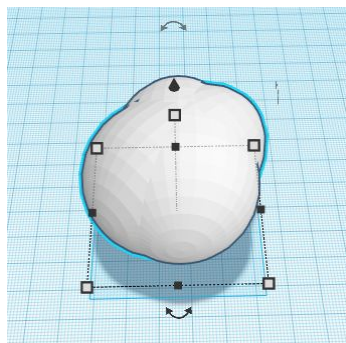
1. Sign in to Tinkercad.com and click the Create New Design button.
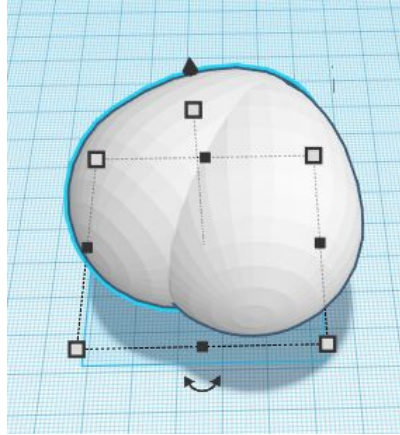2. In the menu on the right of the screen change from Basic Shapes to Characters.

3. Drag and drop an egg to the workplane. Rotate your view so you are looking at the right side of the egg. Rotate the egg -90 degrees so it is laying on its side.
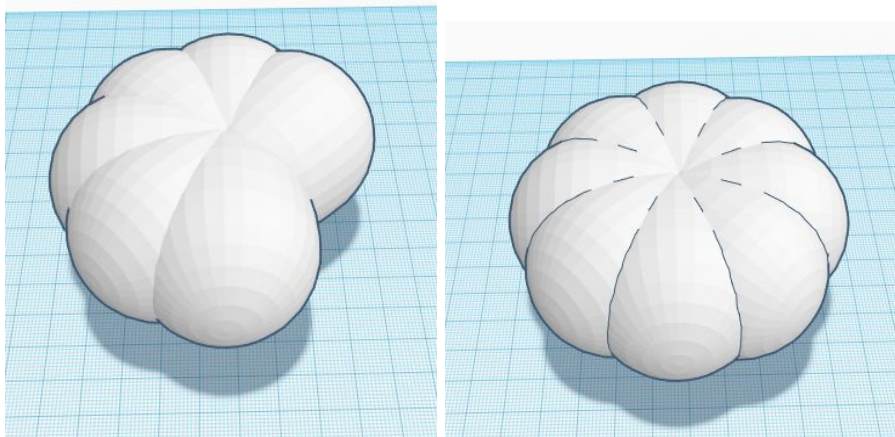

4. Return to the front view of the workplane. Duplicate the egg (CTRL + D).
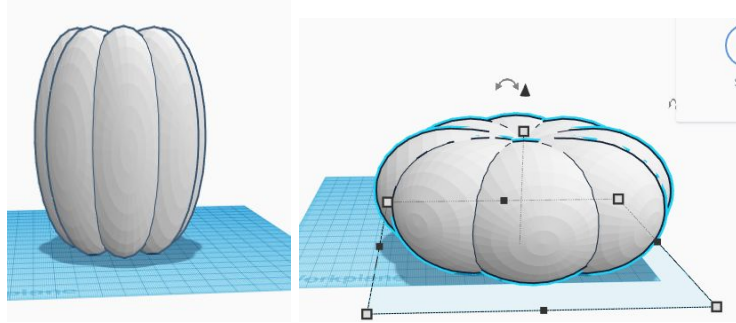5. Rotate the duplicated egg 45 degrees.

6. Using the arrow keys, shift the egg 10 mm to the left and 5 mm to the back of the work plane.
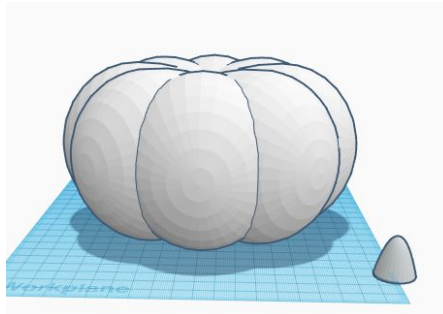

7. While the duplicated egg is selected duplicate (CTRL + D) the egg 6 more times. This will create a new egg and rotate it automatically for you.
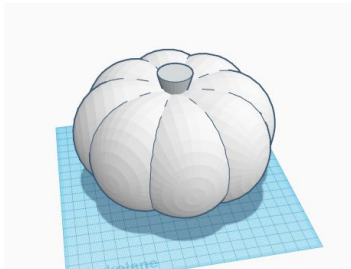

8. Select all of the eggs and group them together.
9. Select the pumpkin and press 'D' to drop the pumpkin down so it is touching the workplane.
10. Resize your pumpkin by dragging the white squares. If you press 'SHIFT' while dragging the white squares you can scale your model and keep the same relative proportions. Make yours short or tall, fat or skinny!
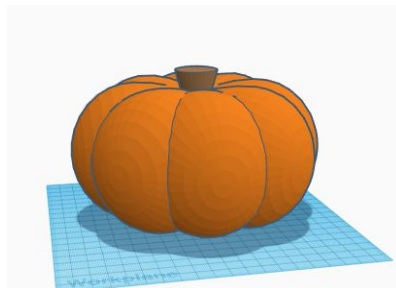
11. Drag and drop a paraboloid from the basic shapes menu onto the workplane to create a stem.

12. Rotate the paraboloid 180 degrees. Change the dimensions however you like to style your stem. Lift the stem and place it in the top center of your pumpkin using the align tools. Feel free to try out other shapes for stems!
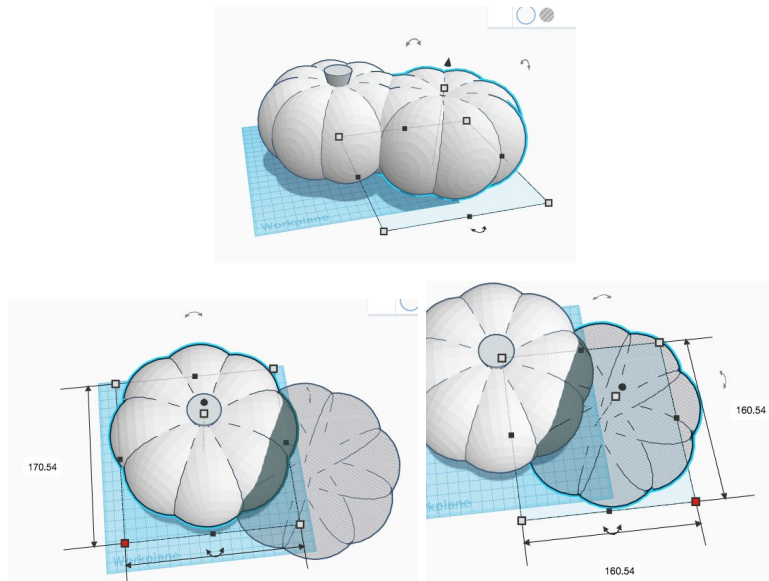

13. If you wish to have simply a pumpkin that is not carved, group the pumpkin and the stem together! You can also color the stem and pumpkin if you leave them ungrouped.
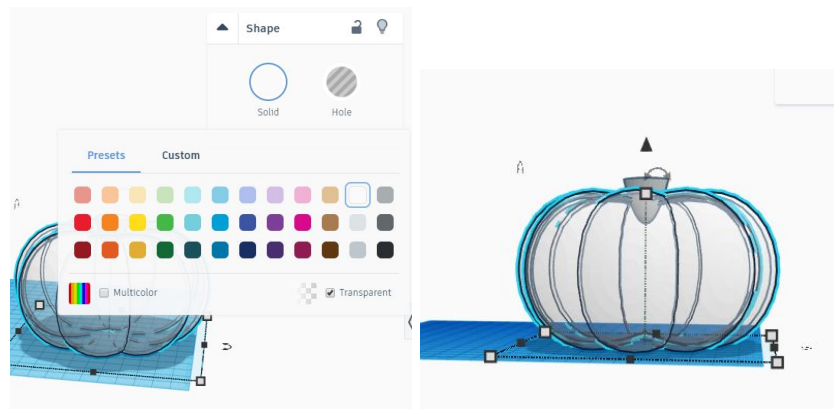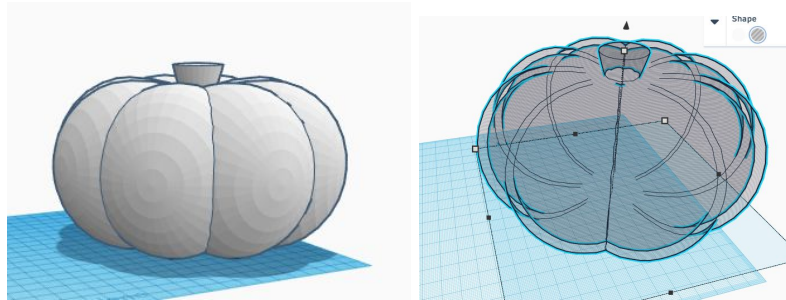
Carving Your 3D Pumpkin

1. Leave your pumpkin and stem ungrouped. Select the pumpkin and duplicate it (CTRL + D). Turn your duplicated pumpkin into a hole. While pressing the SHIFT key, resize the duplicated pumpkin so it is smaller than the original.
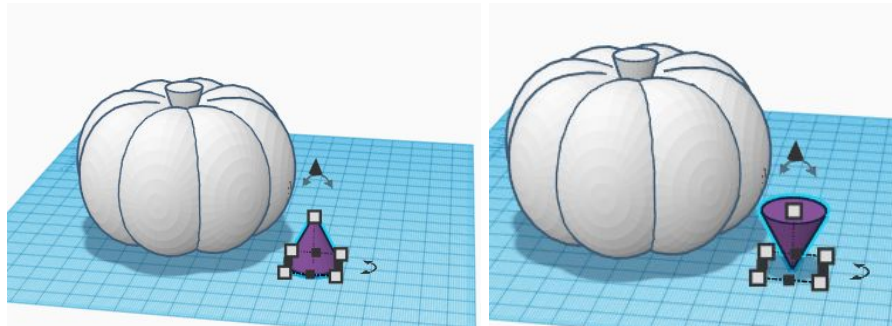

2. Select the duplicated pumpkin hole and the original and align them so the duplicated pumpkin is completely centered inside the original. Don't forget to center it in the up-down direction. Make sure to realign the stem with the center of the pumpkin as well.
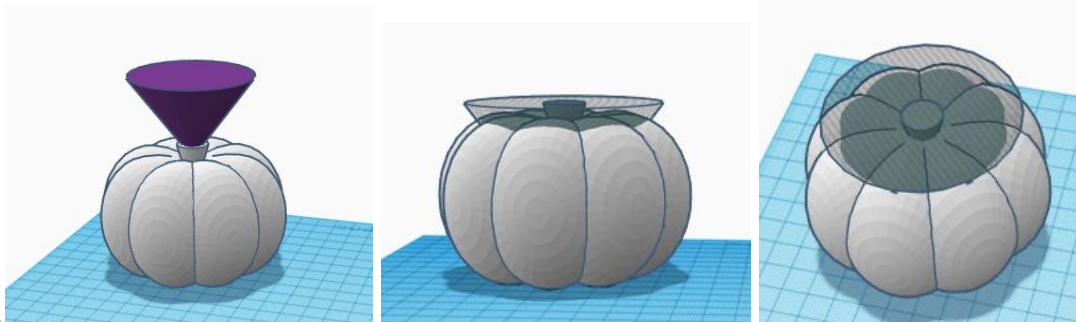3. Make the outer pumpkin transparent to check that the inner pumpkin is aligned properly.

4. Select all three objects, original pumpkin, duplicated pumpkin hole, and stem, and group them together. If you leave your object transparent, you can see that your pumpkin is now hollow!
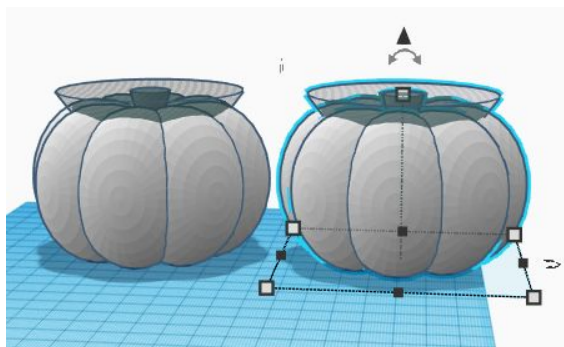
5. Now we are going to cut a lid in the top of the pumpkin. Drag and drop a cone to the workplane and rotate it 180 degrees.
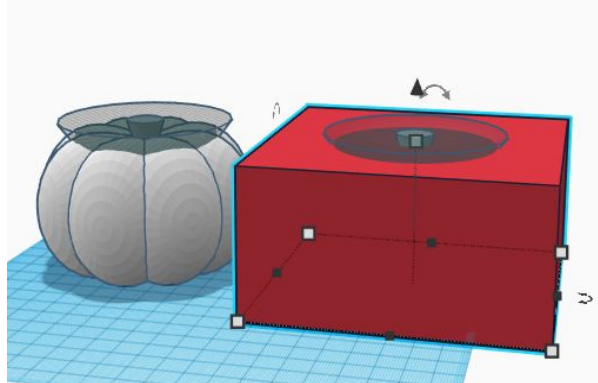

6. Resize the cone and place it at the top of the pumpkin, centering it using the align tool. Turn the cone into a hole and lower it so that it cuts a lid into the pumpkin. Make sure that the top of the cone is higher than the top of the stem
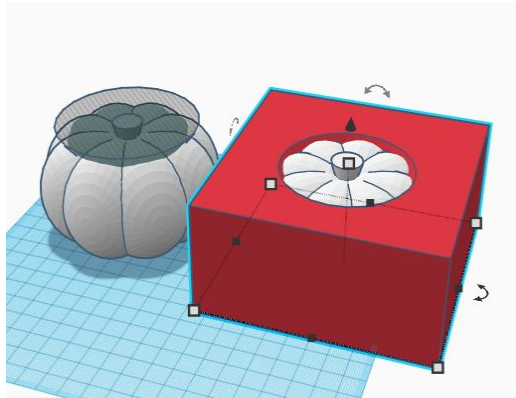

7. Select the cone and the pumpkin and duplicate both (CTRL+D). Use the arrow keys to shift the duplicates over.
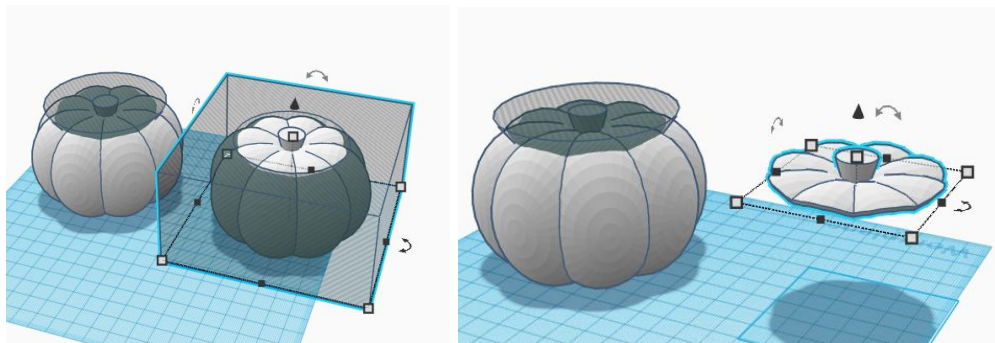
8. Drag and drop a box and resize it so that it covers the entire duplicated pumpkin and is almost as high as the cone.
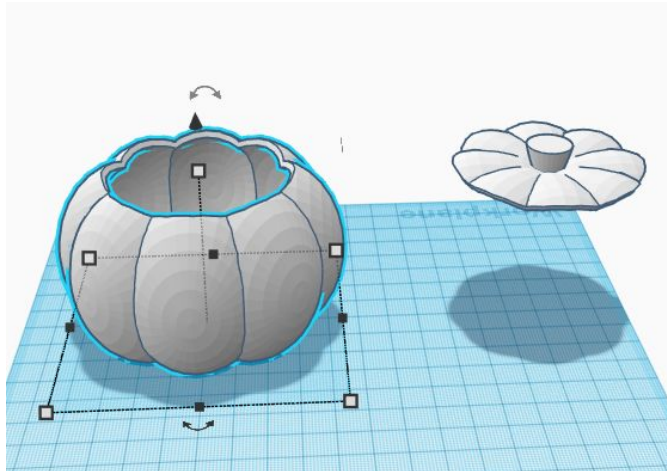

9. Select the box and the duplicated cone and group them together (Do not select the duplicated pumpkin).
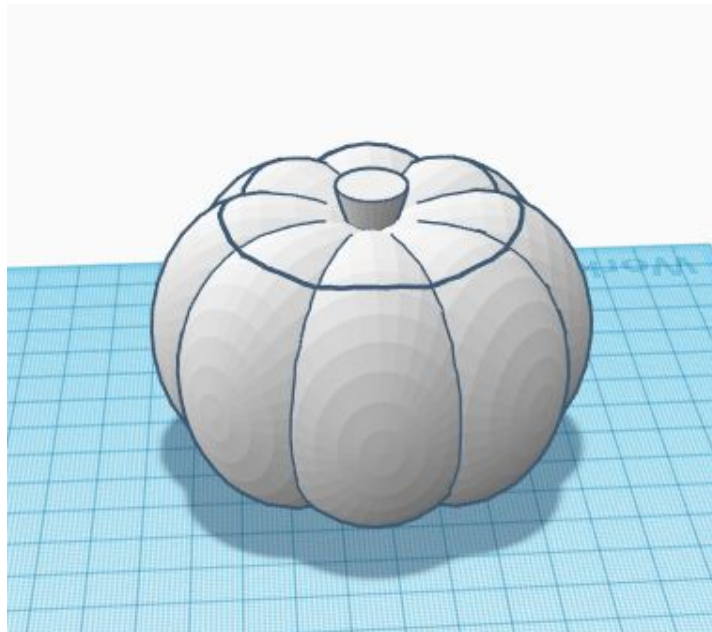

10. Turn the box into a hole and group it together with the duplicated pumpkin. You should now have the lid to your pumpkin!

11. Return to the original pumpkin and cone and group them together. You should now be able to see the hollow inside of your pumpkin!
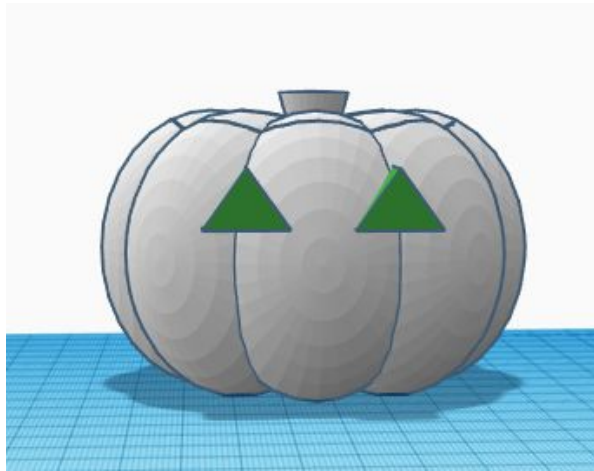
12. Realign the top and bottom together using the align tools. You have now carved the top of your pumpkin!
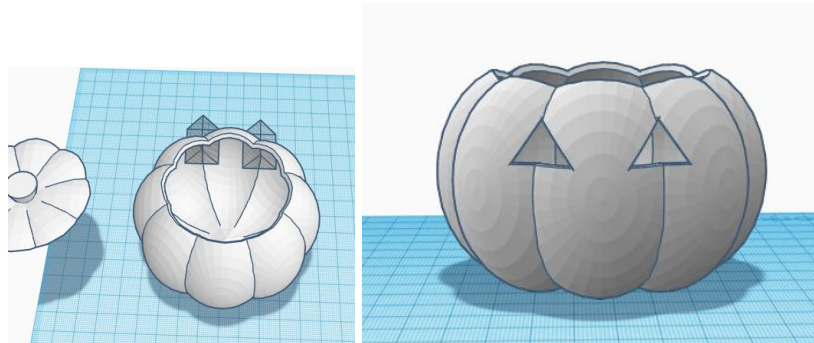

13. Next, you can either carve a face into your pumpkin or choose a pumpkin carving stencil.
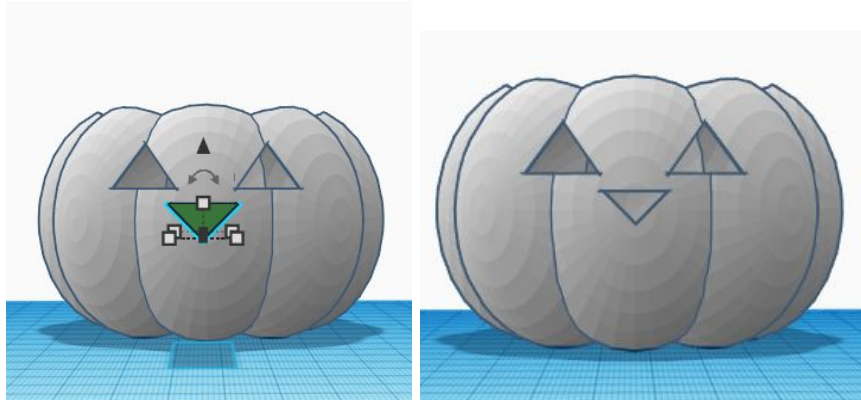
Carving a Face Into Your Pumpkin

1. Drag and drop a roof shape onto the workspace to create eyes. Resize the object to your desired size and place it in your desired location on the side of the pumpkin. Duplicate it and move the second triangle over using the arrow keys to create the second eye.
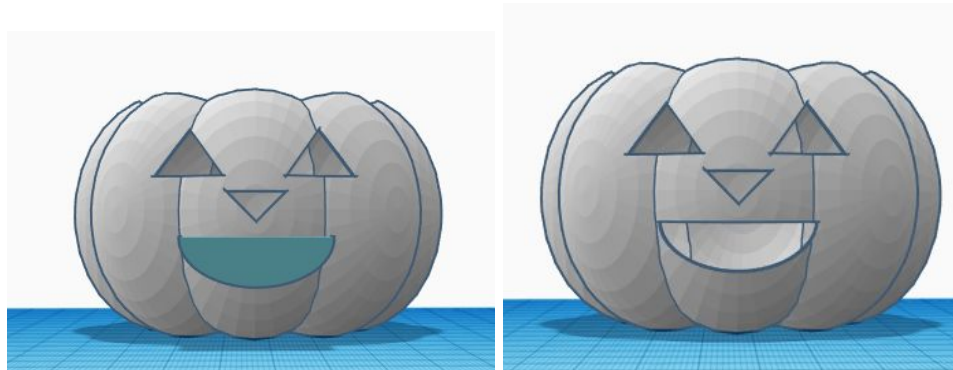

2. Turn both eyes into holes. It might help to move the top of the pumpkin so you can see inside and make sure the triangle holes are cutting through the pumpkin completely. Group the eyes and the bottom of the pumpkin.
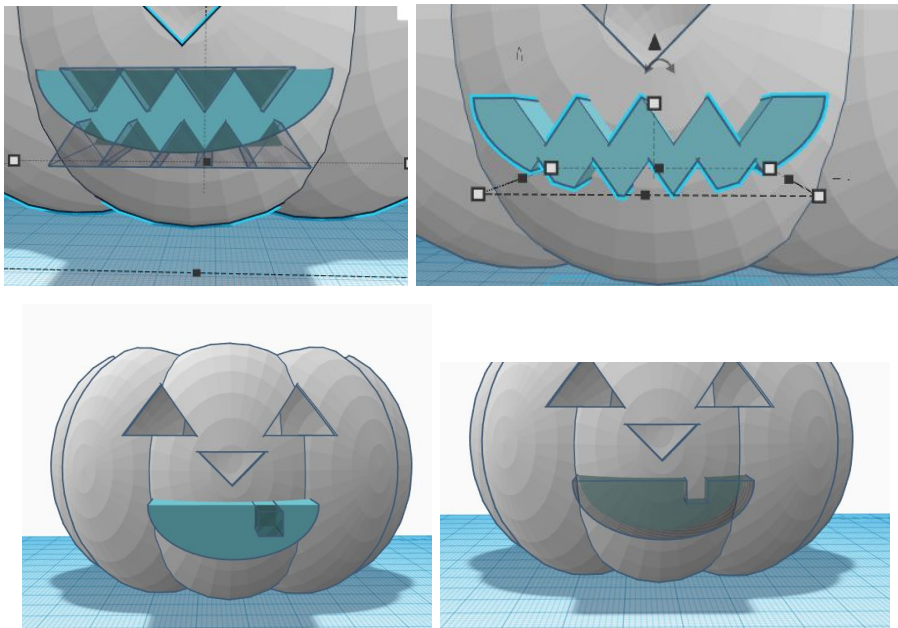

3. Drag and drop another roof shape and rotate it 180 degrees to create a nose. Resize and place the nose on the side of the pumpkin. Turn the nose into a hole and group it with the bottom of the pumpkin.
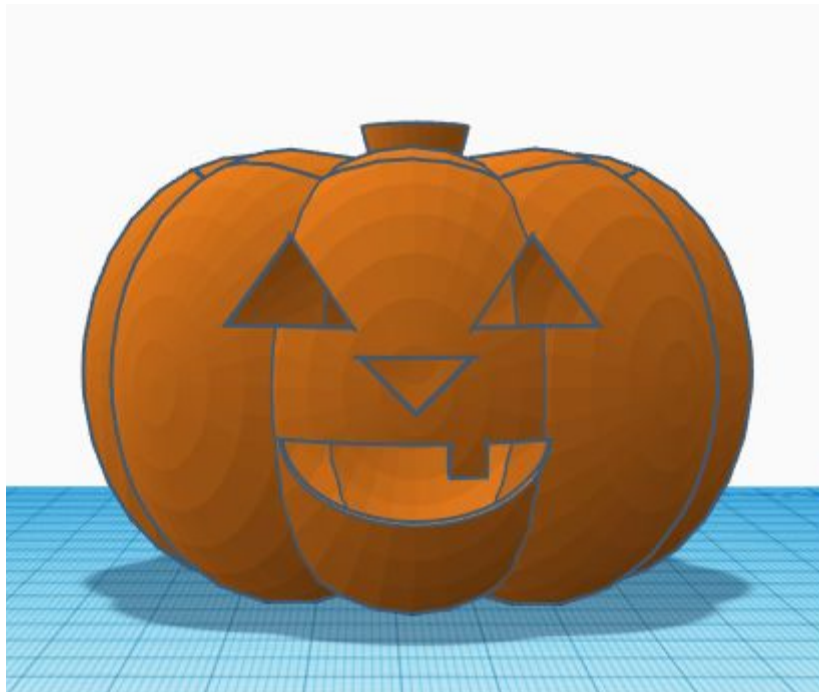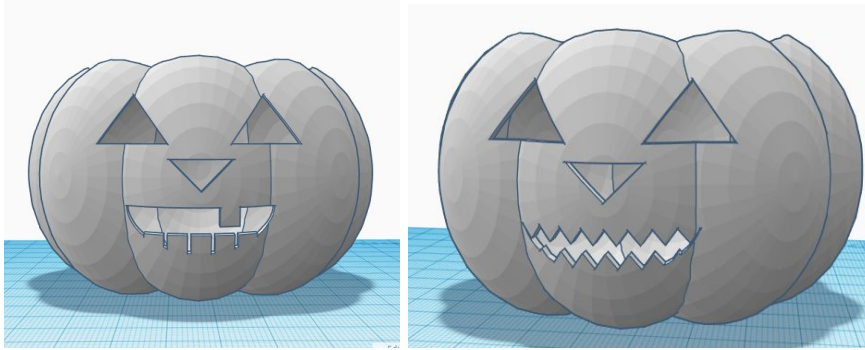
4. Drag and drop a round roof shape onto the workplane. Rotate it 180 degrees and resize to create a mouth. Place it on the side of the pumpkin where you like.

5. You can use the mouth as is, or you can customize it by using triangles and squares as holes. Group those holes with the mouth first, before grouping the mouth with the pumpkin.
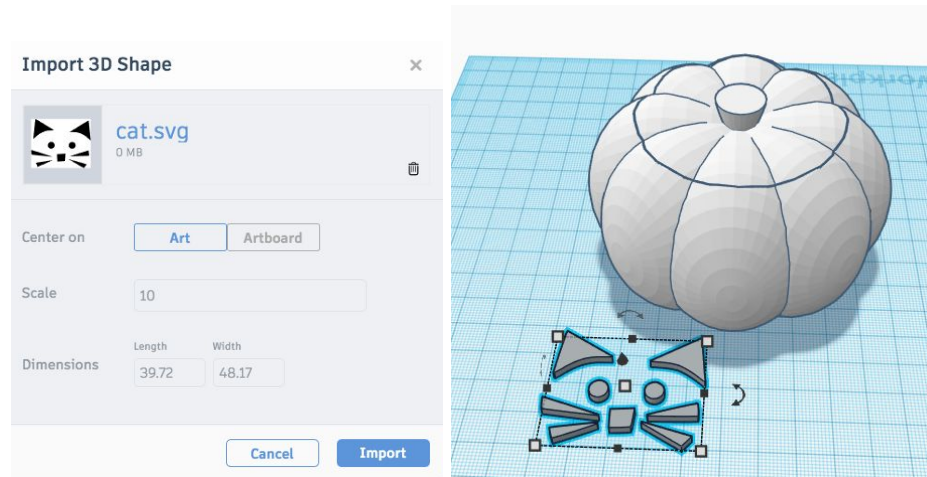
6. Turn your mouth into a hole and group it with the pumpkin. Congrats you have digitally carved a pumpkin!!
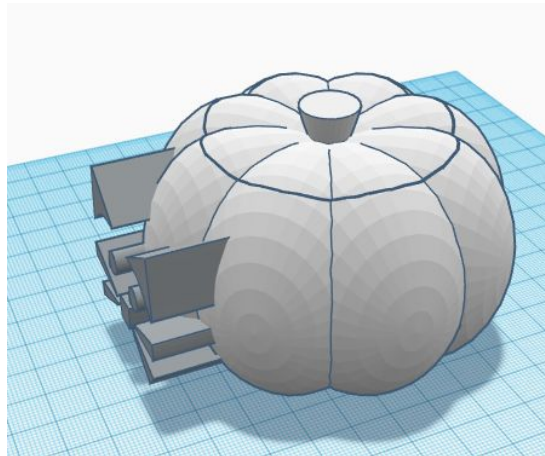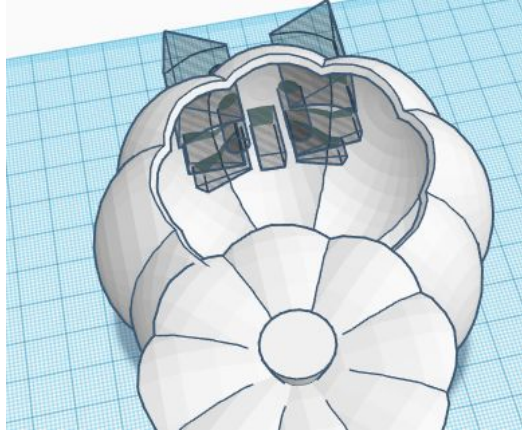
Using a Pumpkin Carving Stencil

1. Select your pumpkin stencil image. Convert your image file into an .svg file. You can use a site like https://convertio.co/jpg-svg/
2. Click the Import button in the top right.
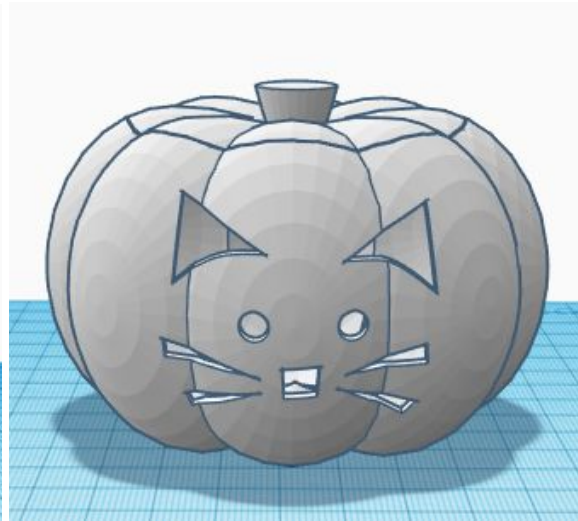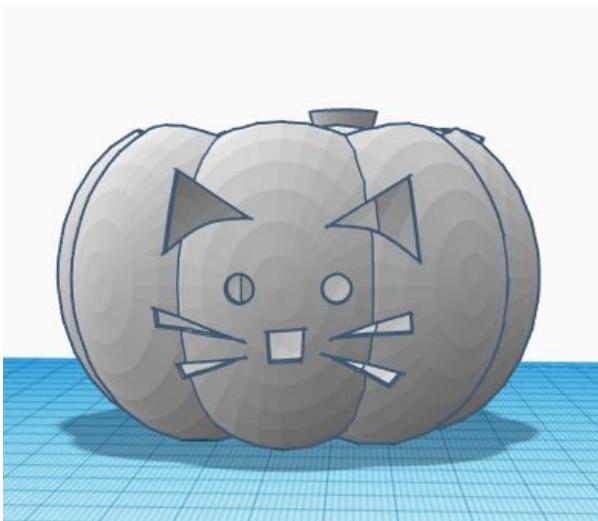3. Select your image file and scale it as you like.

4. Resize your imported image as needed. Rotate your object 90 degrees. Place your image where you like it on the side of the pumpkin. Extend its length so that it will be easier to see it cut through the pumpkin.

5. Turn your image into a hole. It might help to move the top of the pumpkin so you can see the inside.
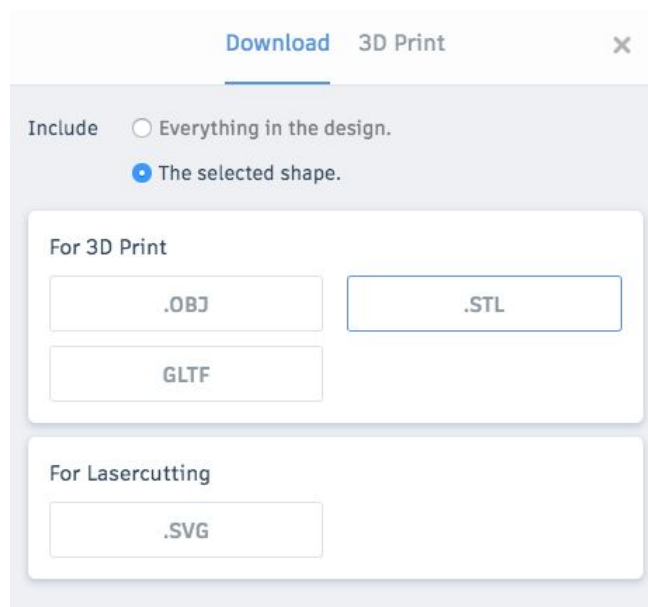
6. Group the image and pumpkin together. Congrats you have digitally carved a pumpkin!!

Exporting Your Carved Pumpkin for 3D Printing

1. If you wish to 3D print your pumpkin, you can export the top and bottom part separately.
2. Select one of your parts and click the Export button in the top right. Make sure 'The selected shape' is selected in the Include section and click the .stl button to download the file.

3. Repeat the previous step with the other part of your pumpkin.