

# Tinkercad Instructions

Sign in

Create new design

Drag a cone into work space (left click, hold, drag) from Geometric.

Right click on the blue work space to rotate the workplane.

Use the scroll wheel to zoom in or out.

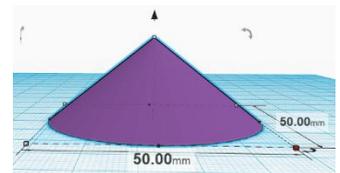
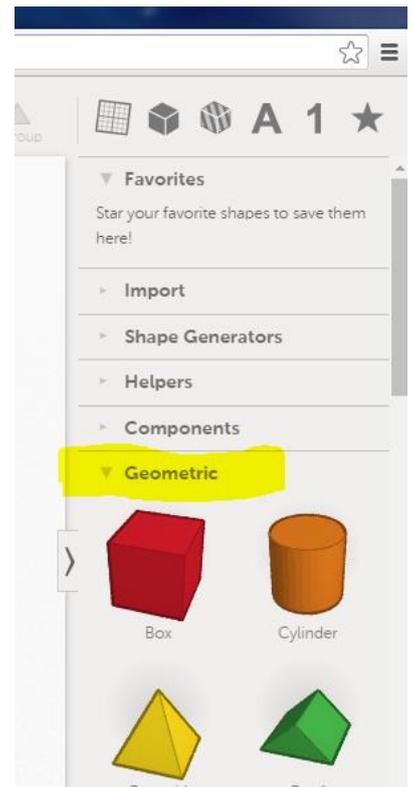
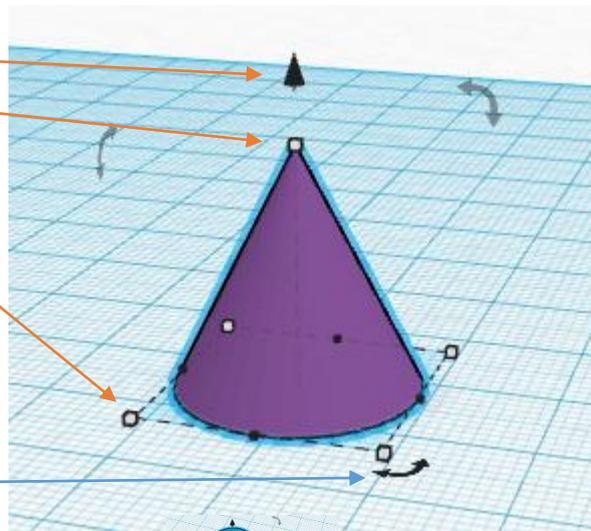
Lifts object up off workplane

Makes object taller

Drag corner handle to increase base size

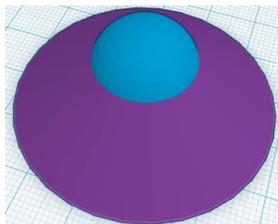
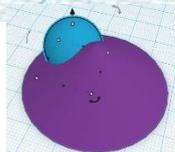
Suggested height is 20 and width 50

Rotation handles



Place a sphere on workspace.

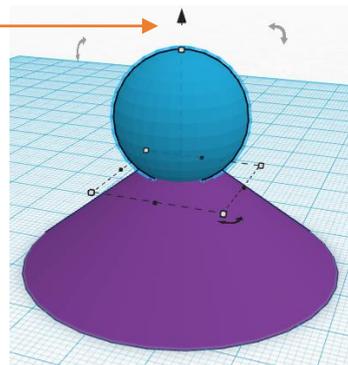
Then move it to be on top of cone,



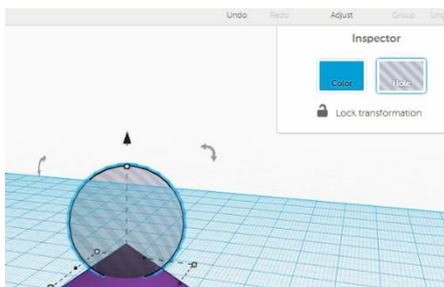
then use lift hand to raise it up

You can also resize the sphere

This will be the crater.



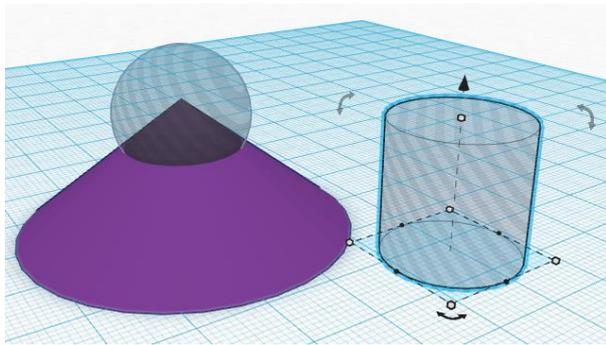
With the sphere selected click on the hole button.



this will make the sphere transparent and create our crater cut out.

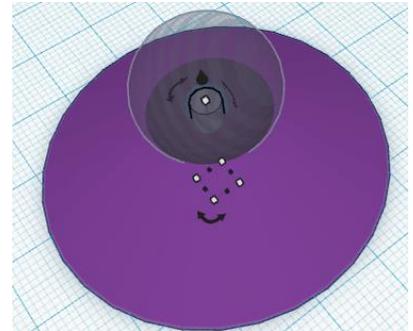
Next we want to create a vent through the centre of the volcano. We can use a cylinder and the hole button or use a

premade hole. Choose the cylinder hole from the holes menu and drag into on the work space.

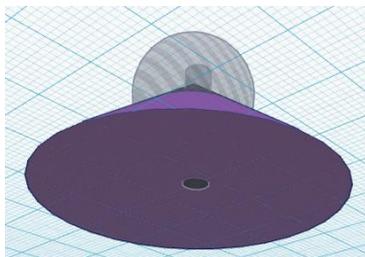


resize the hole so that it is about 4x4.

Then drag it to the centre of the volcano. You may need to rotate the workplane to see your position and line it up correctly.

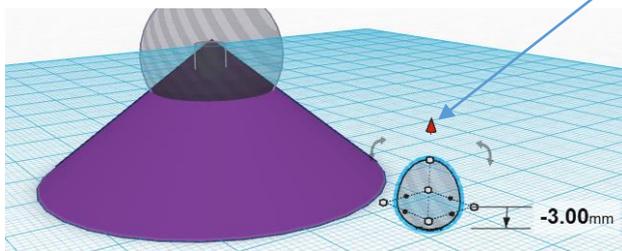


Check the view from underneath.



If you want to put a magma chamber in the bottom you could use the egg hole in the extras menu.

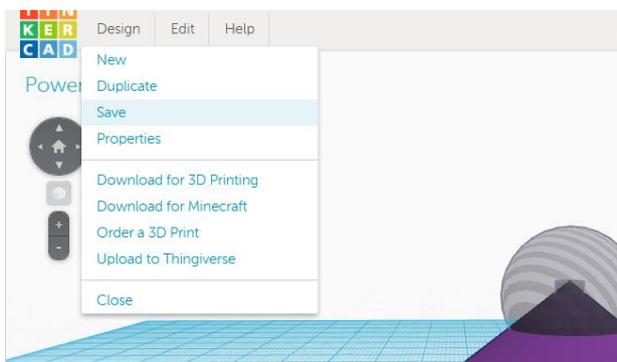
Resize the egg hole and lower about 3mm into the workplane.



Then slide the egg hole into the bottom of the vent. This is easier to do from underneath.



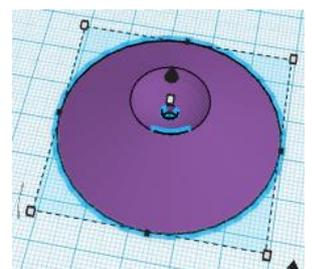
This is now the whole volcano. If a cross section is wanted, for example two halves, then we will need to split this in half. First make sure the design is saved. By default Tinkercad will create a bizarre random file names which will show on the top left-hand corner of the screen. You can change this in the properties menu



Click Design and then select save.

Once it is saved click duplicate, so that we can split a version of the volcano.

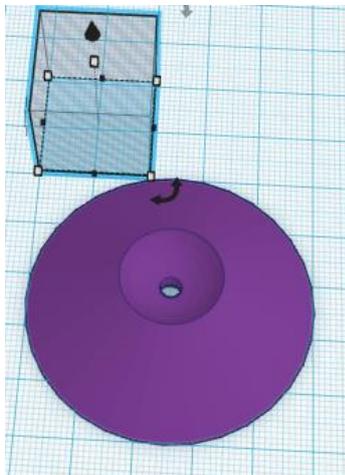
In the new copy version, drag your mouse over the objects to select them all and then select Group from the ribbon menu. When it is grouped the hole shapes will disappear and you will see the actual spaces.



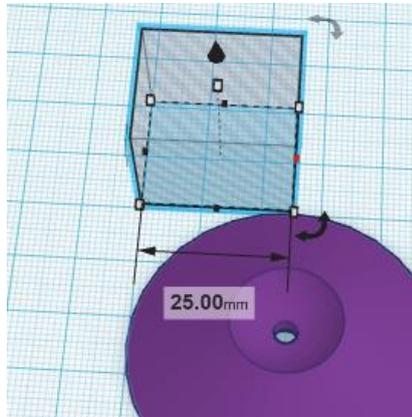
In Tinkercad the easiest way to create the two halves is to place a very think hole rectangular wedge down the middle to split it. Use a width of .5 or .25!

Another way would be to make two separate halves (as opposed to one divided whole – yes they are different)

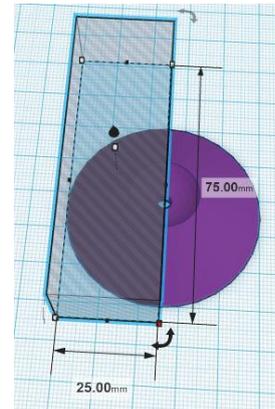
Drag a hole box onto the work plan and position it to align with the corner of the volcano object.



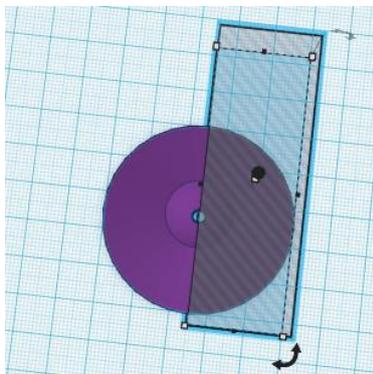
then adjust the width of the hole to the centre of the volcano.



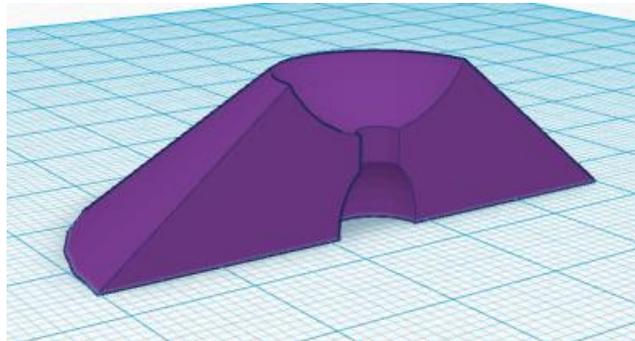
then lengthen the hole to cover half the volcano.



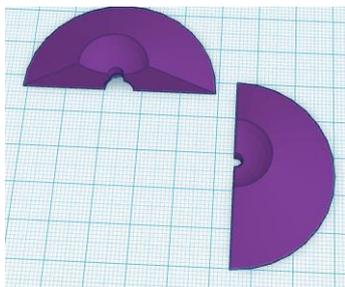
If we have a symmetrical object we could just print this twice, but if we need to get both sides then we are going to want to save this version and then move the hole across to the other side to get the other half and save that. So save this copy, then duplicate the copy and move the hole box to the other side



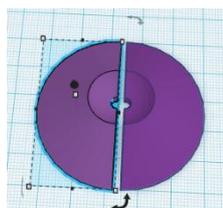
Now you can group it to see it properly and it is ready to export for printing.



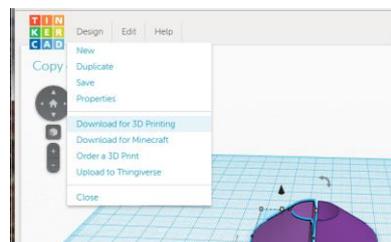
However, it would be nice to have both halves in the one print. So select the volcano by clicking on it then select copy from the edit menu. Click on the Tinkercad icon, then open the First copy of the half volcano. It will still be ungrouped so go ahead and group it, then paste the second half in.



They will probably overlap, so move them around to be adjacent to each other for easy printing.



now we can download for 3D printing



Choose STL file type. This file will then be adapted by the specific software for your type of 3D Printer.