

Sculpting

We now need to make some more "organic" changes to our mesh by sculpting it (i.e. using brush strokes to adjust our mesh).

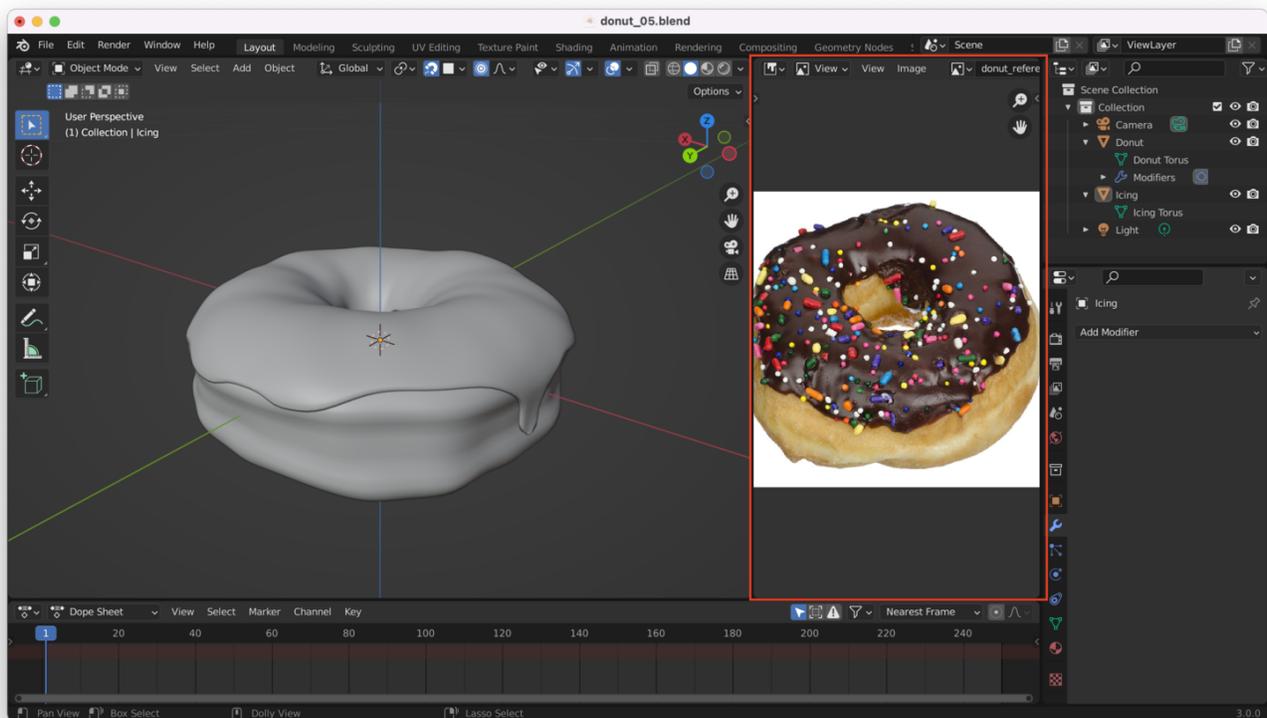
Warning: You need to apply your modifiers *before* you start sculpting. It's also important to make sure the modifiers get applied **in the correct order**. In this case, for the icing, that means:

1. Shrinkwrap
2. Solidify
3. Subdivision Subsurface

You can apply modifiers by clicking the little arrow next to each modifier item, or by using "Control + A" with the modifier selected ("Command + A" on Mac).

But First, A Note On Closing Windows In Blender

Like me, you might still have your reference image loaded up:

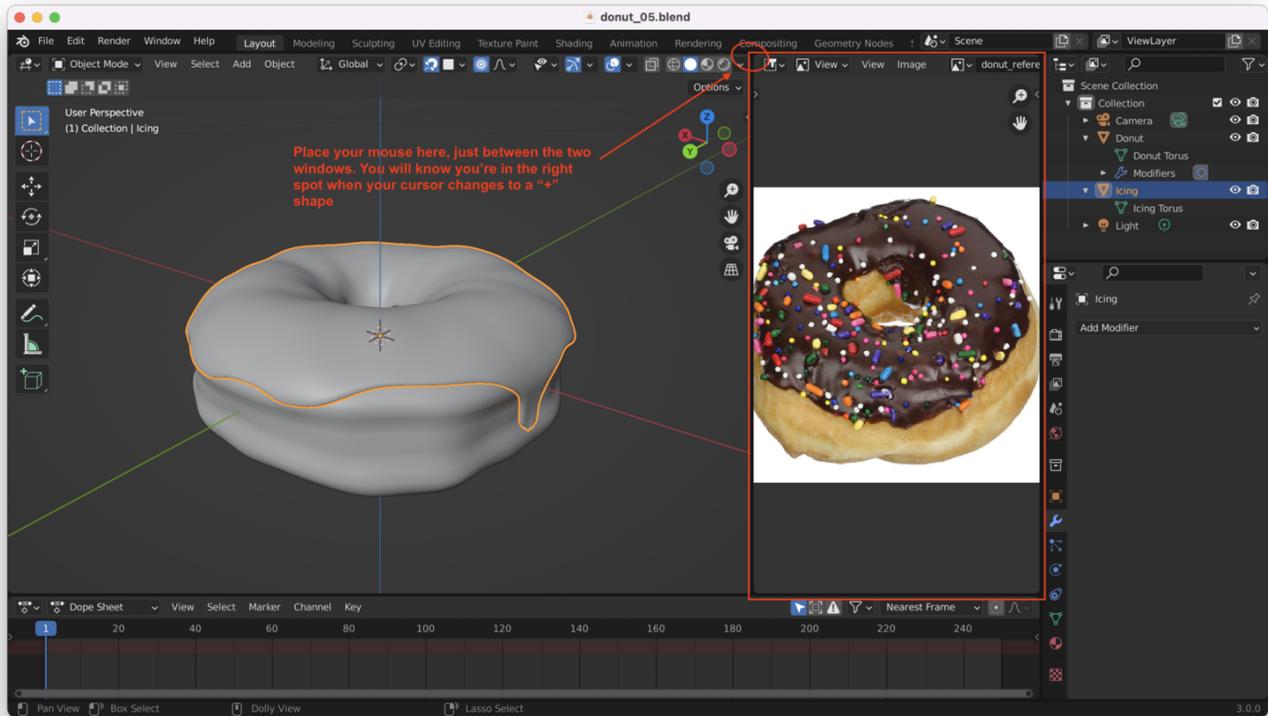


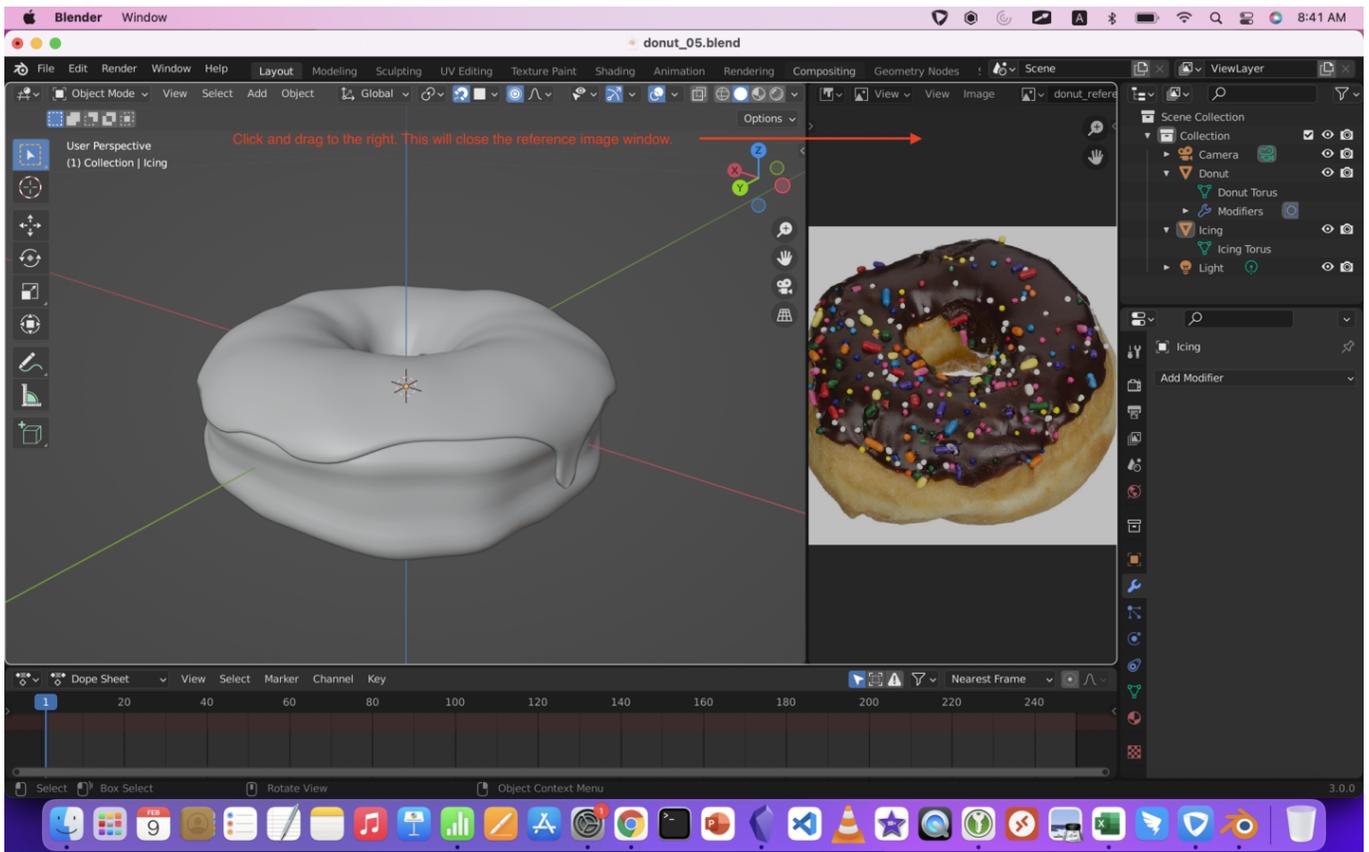
You might want to hide this so that you can more easily see what you're doing when you start sculpting.

There are two ways to do this:

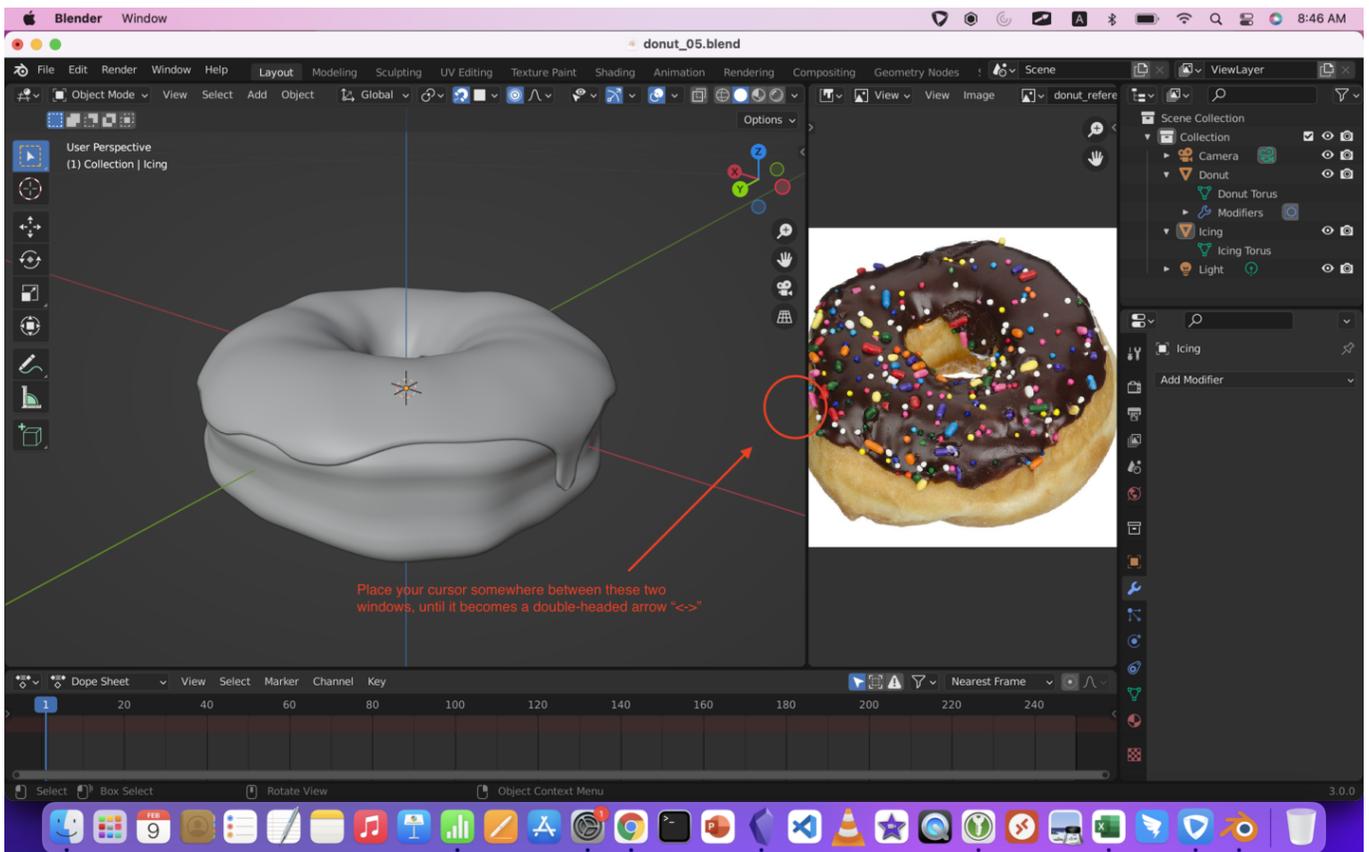
1. Place your cursor just between the two views (image editor and layout view) at the top of the screen, then click and drag to the right to close the image editor window.
2. Place your cursor along the left edge of the image editor window, until it becomes a double-headed arrow (\leftrightarrow), then right click and choose "Join Areas". Next, click on the image editor window, which will then close.

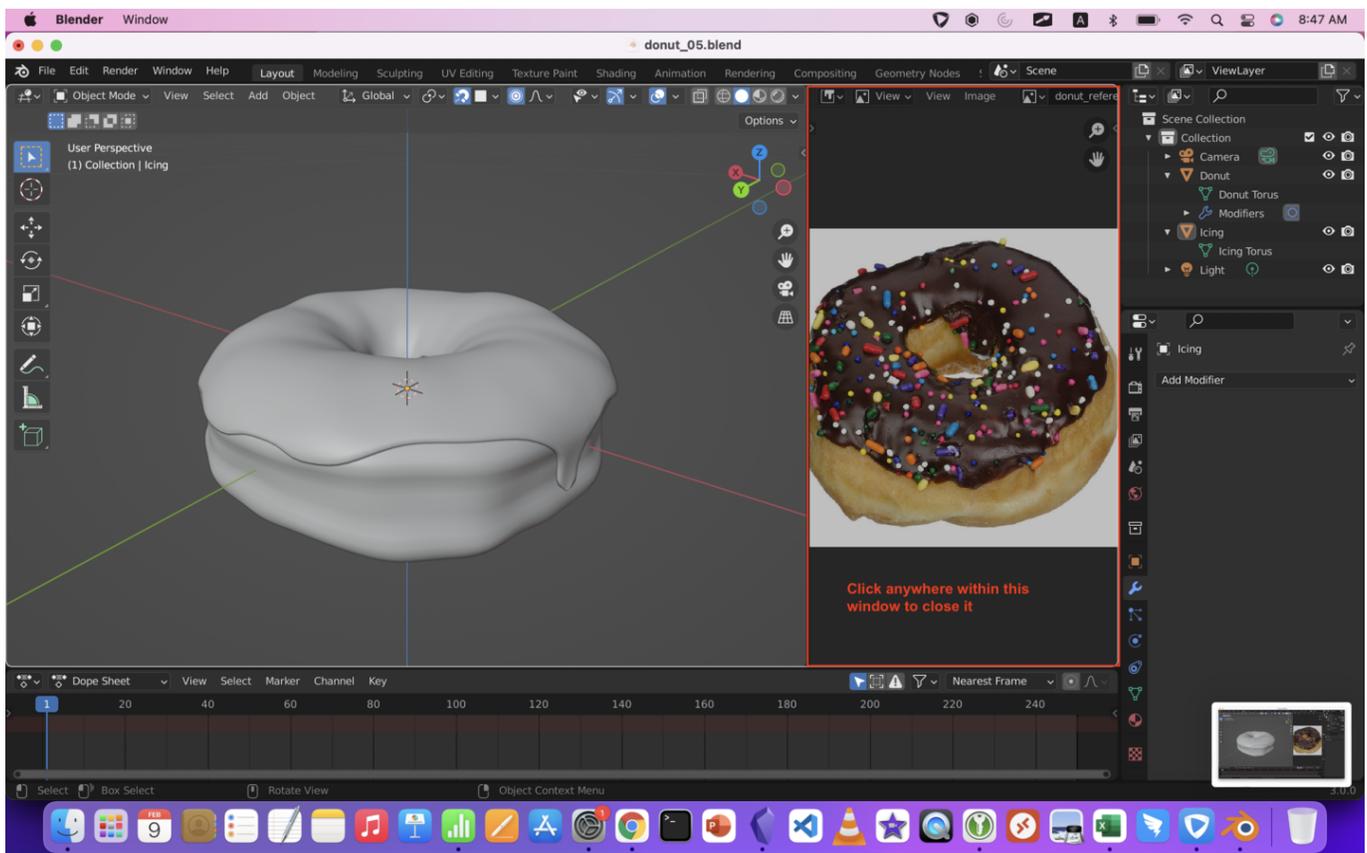
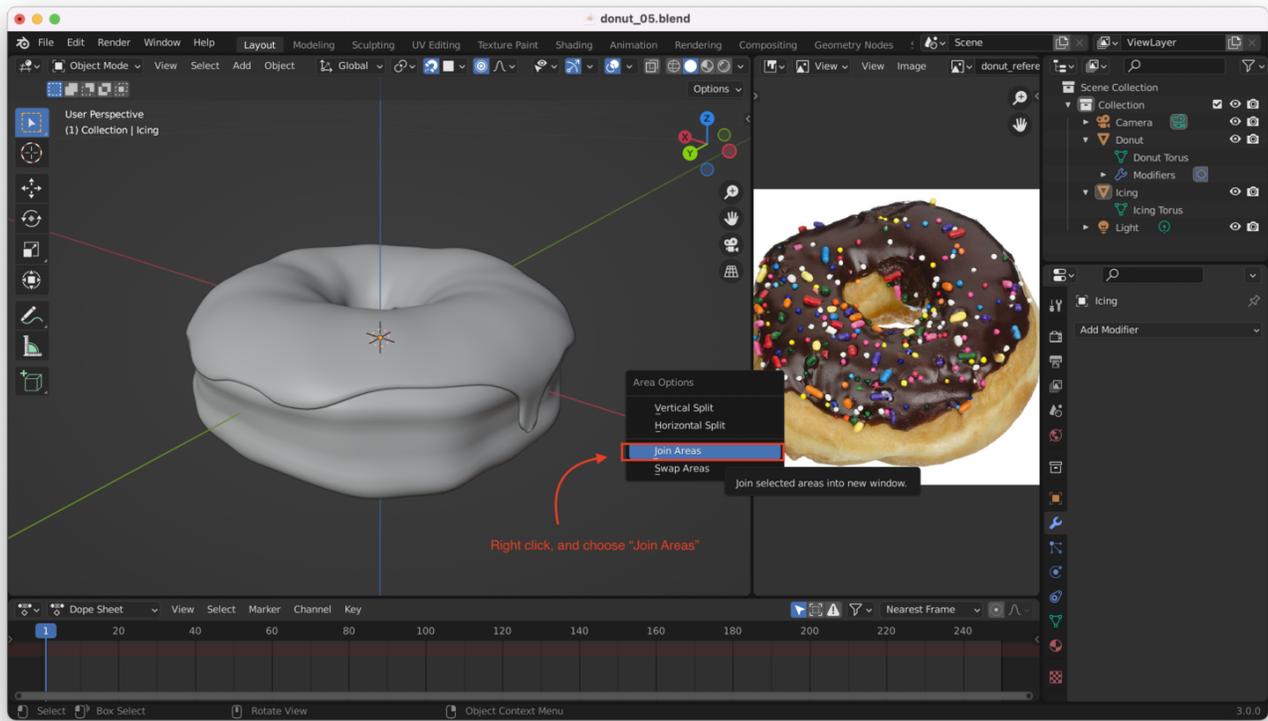
First Approach: Click And Drag From The Top Corner





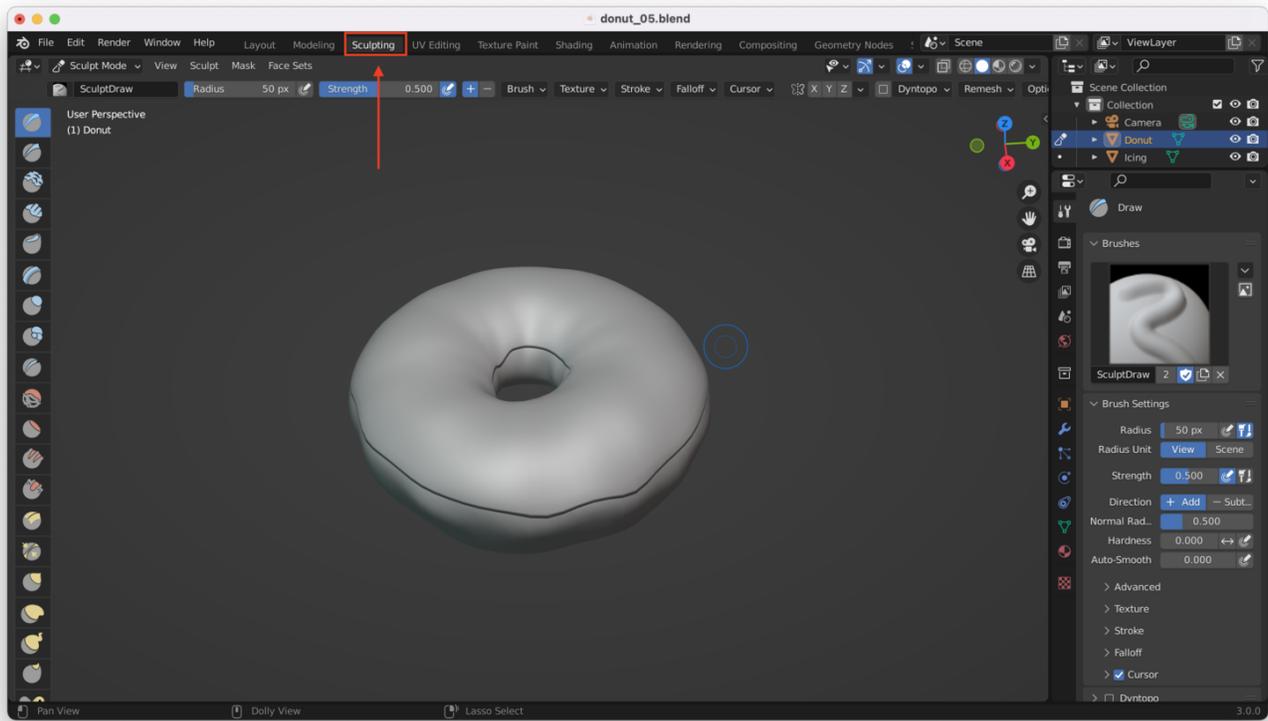
Second Approach: Right Click From Between The Two Windows





Start Sculpting

We will need to switch to the "Sculpting" mode from the top menu bar:



Sculpting Basics

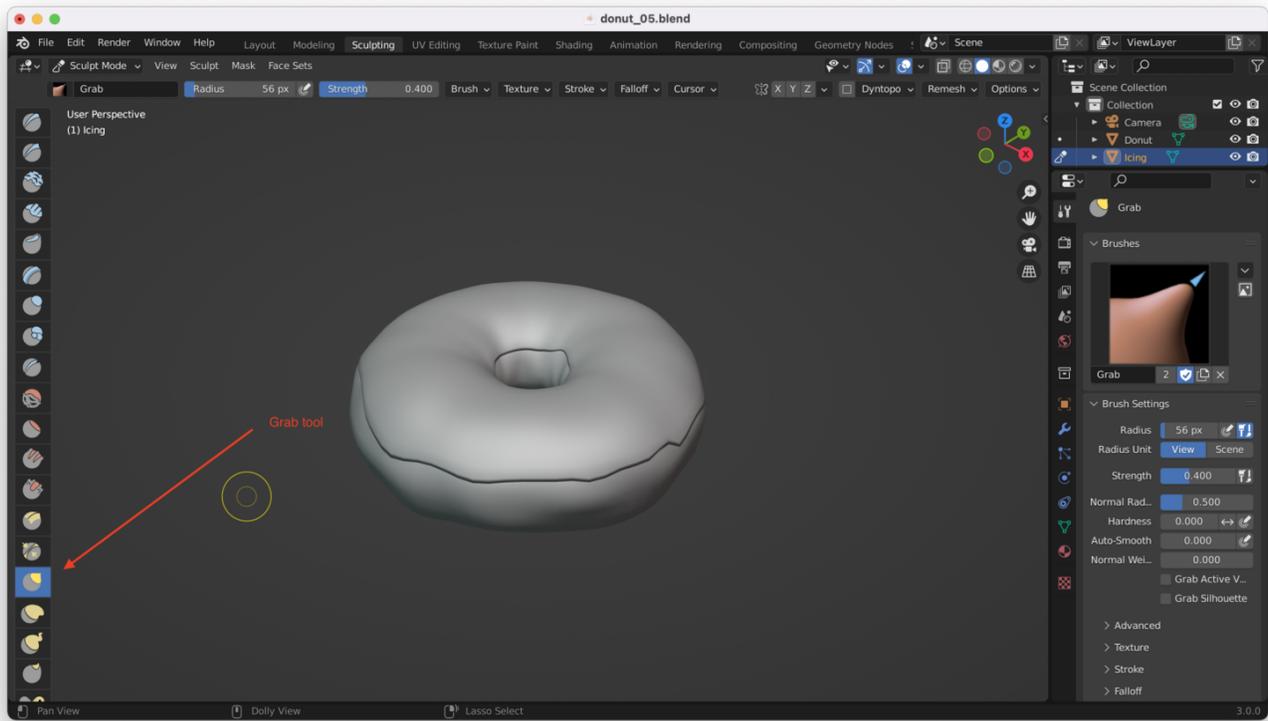
Clicking on any part of the icing and moving the mouse (or trackpad) will start "drawing" on the mesh (i.e. "pulling" it out).

Holding down "Control" while you click and drag will "push" into the mesh (making a dent or concave area).

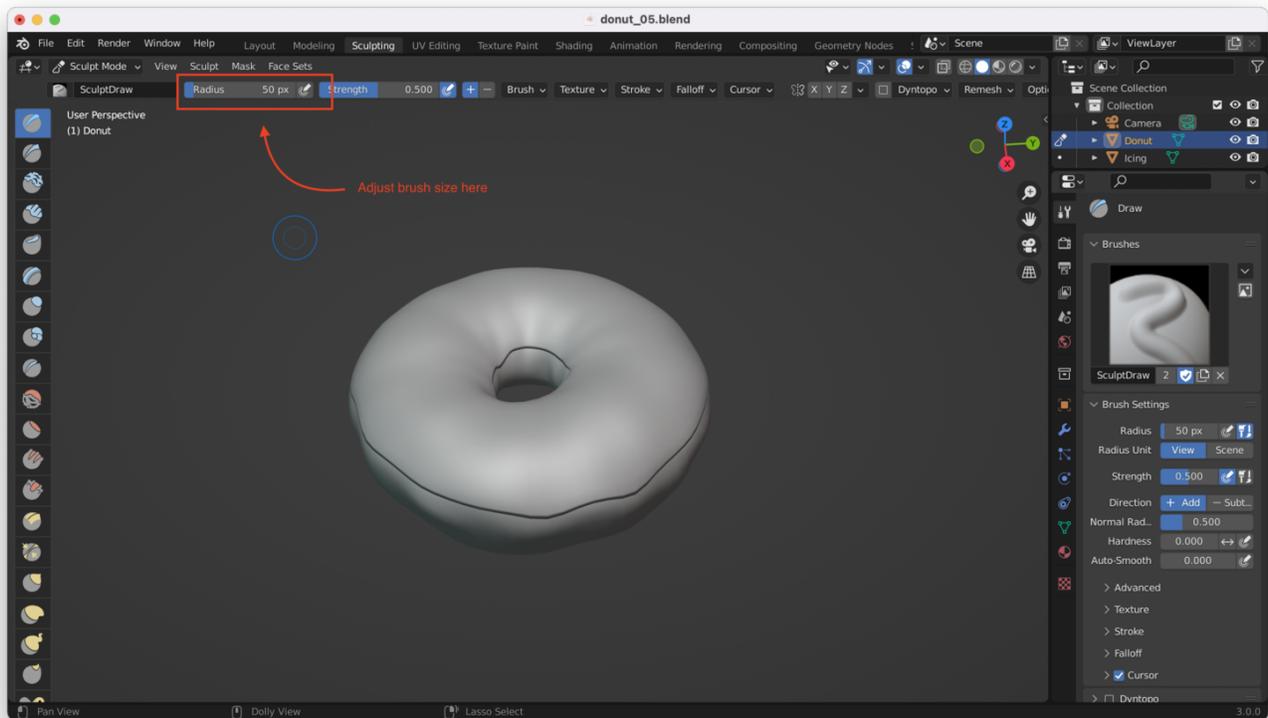
Grab Tool

Tip: You can grab things in sculpt mode by tapping the "G" key, then dragging on a portion of your mesh.

You can also enable the "Grab" tool from the sidebar:



You can change the brush size using the "Radius" tool in the upper left-hand corner:



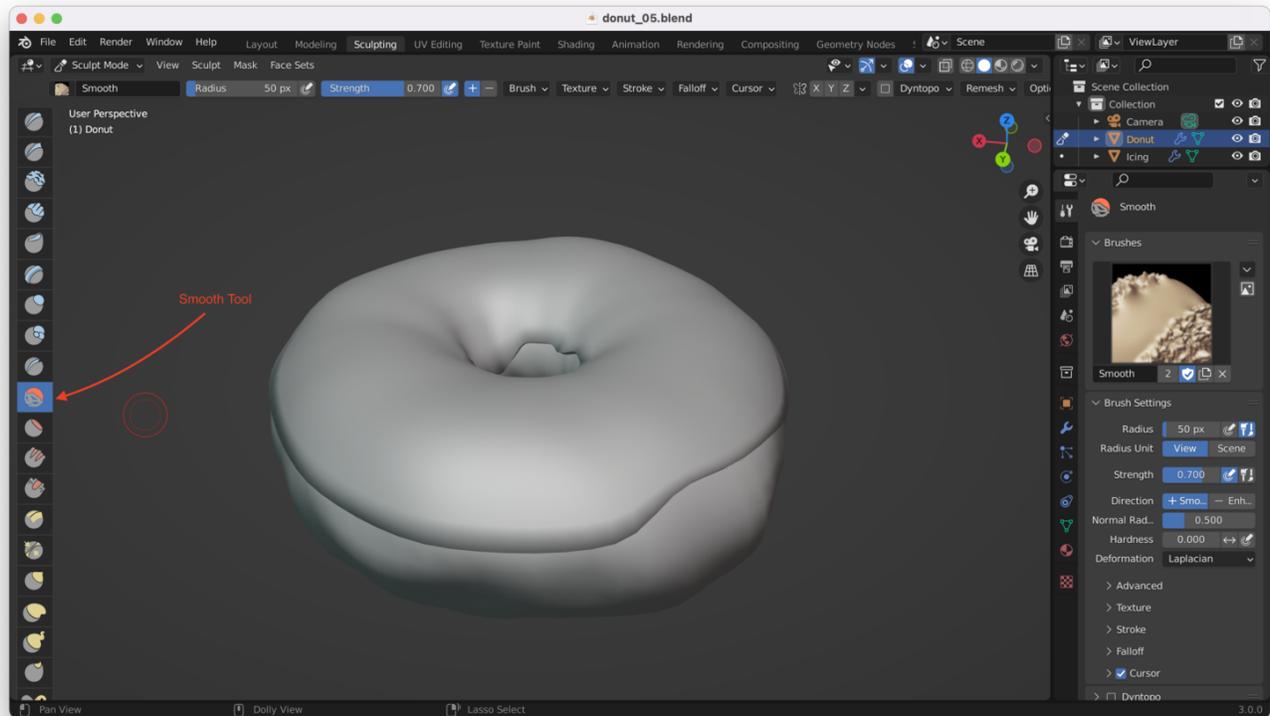
Changing this will change the size of the area that's affected by your brush strokes (mouse movements). The hot key to change brush size is "F".

- "F" key changes brush size
- "Shift + F" changes brush strength (the intensity of the sculpt tool's effect)

Note: you can also set strength from the upper left-hand corner of the UI, right next to radius (see screenshot above).

Smooth Tool

You can also use the **Smooth** tool, which will smooth out details in your mesh:



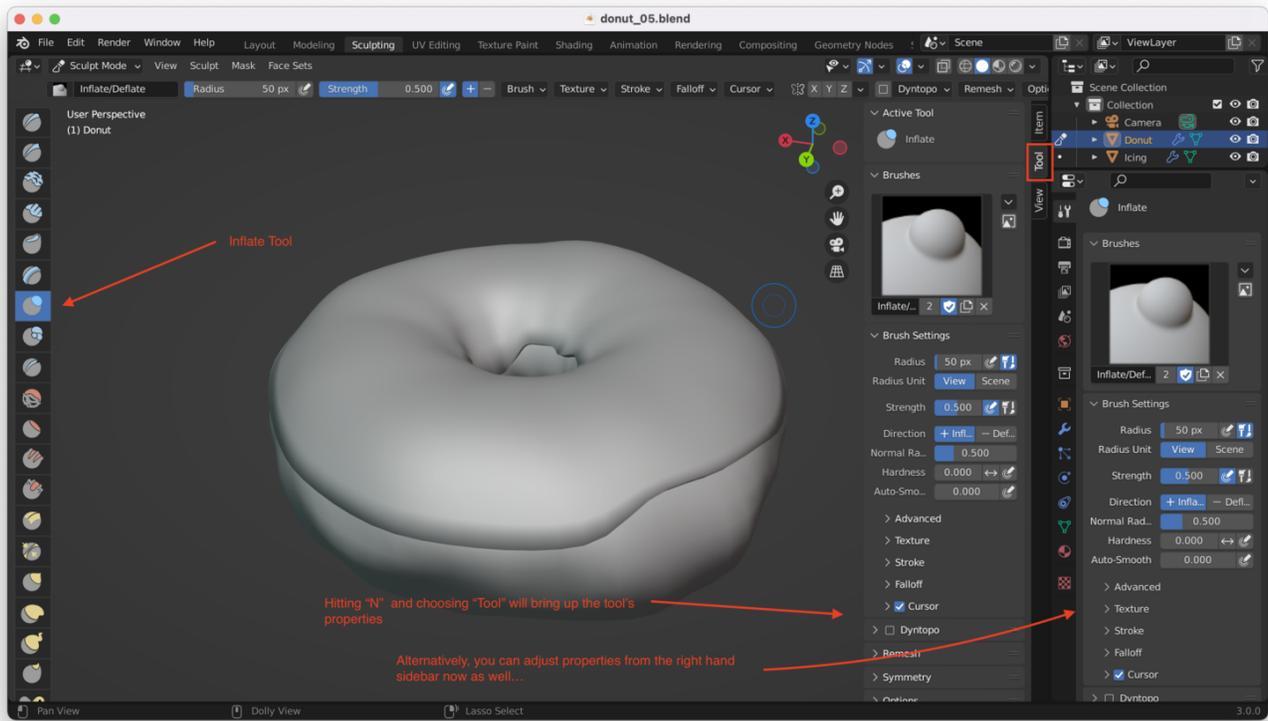
Tip: You can temporarily activate the smooth tool, regardless of what other sculpt tool you are using, by holding down "Shift"

Inflate Tool

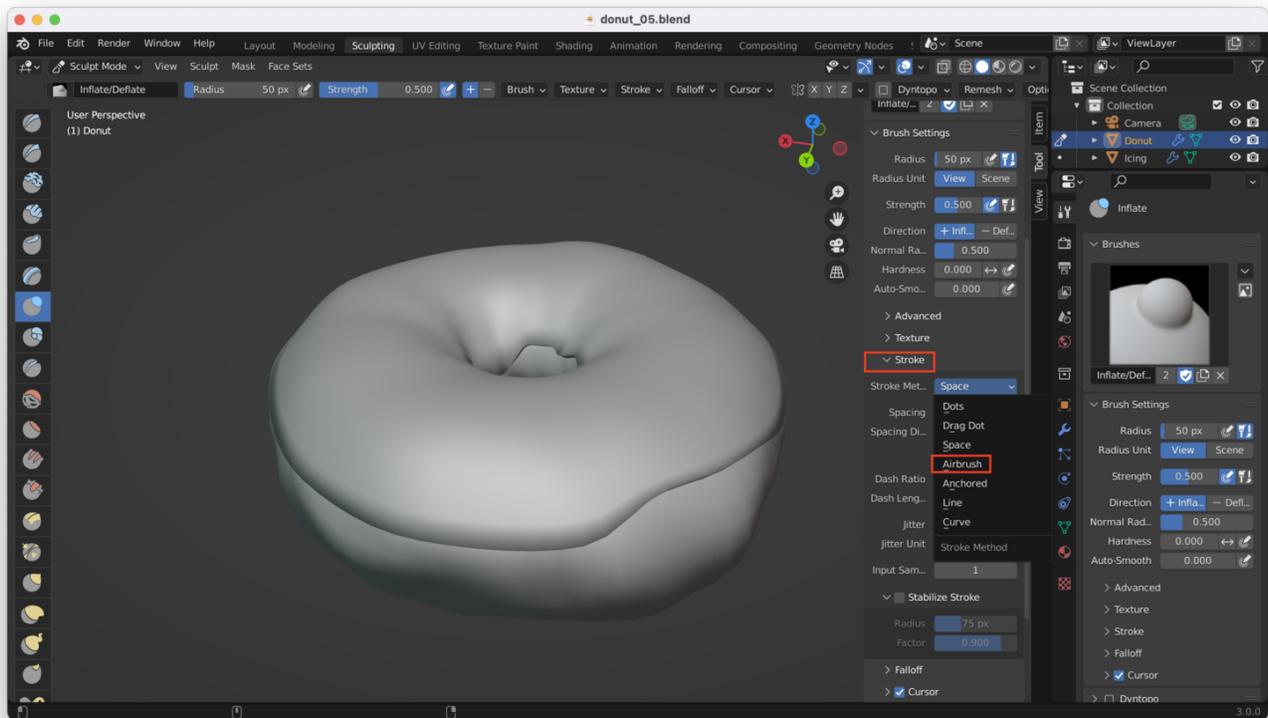
This is the tool that will help us make the ends of our icing "blobs" look more pronounced.

Tip: You need to turn on "airbrush" from the inflate tool settings, otherwise clicking on the mesh won't cause it to inflate. Without "airbrush" turned on, only *clicking and dragging* inflates the mesh, which can make small "touch up" work more difficult.

Hit "N" to open properties, then go to "Tool" to see the tool's properties, like this:



You can enable "airbrush" from here:



You can now shape your icing by alternating between the "grab", "inflate", and "smooth" tools.

The **common keyboard shortcuts** for sculpting are:

- "G" for grab
- "I" for inflate
- Hold down "Shift" to smooth

You can also switch back to object mode temporarily to select your donut, and do some sculpting on the donut as well.

After a little sculpting, I ended up with this "lumpy", organic looking donut (at least, I think it looks OK):

