# **Texture Painting**

So far, all the detail on the surface of the donut has been procedurally generated.

However, sometimes you need to create (or "paint") textures by hand. In our case, we're going to be painting a texture by hand to create the "white ring" that you can see around the center of most donuts (a quick <u>google search</u> should show you what I mean).



We'll be using the "Texture Paint" workspace for this:

Because the donut has no texture data assigned to it yet, it will show up in **purple**:



Purple is how Blender normally indicates missing texture data.

# **Adding An Image Texture**

We need to add an "image texture" to our donut.

We don't want to lose our existing node setup, so we want to add an image texture in our Shading workspace (to add a new "Image Texture" node to our workflow, hit "Shift + A" to add):



Search for "Image Texture":



Connect the "Image Texture" node's "Color" output to the "Base Color" input on the "Principled BSDF" shader node:



From the Image Texture node, we can use the "open" button to map an existing texture onto an object, or we can hit "New" to create a new, blank texture. **This is what we will be doing**.

Clicking on "New" will open a "New Image" popup:



**Tip**: As shown above, blender can do math for you in text fields. Simply putting a "/2" after the height and width fields and hitting "Enter" will cut them in half...for a final size of 512×512.

Because our scene is not going to be super high resolution, we'll keep the height and width of our texture very small (512×512 pixels). Choosing a higher texture resolution means working with our donut in Blender will be slower (more resources required to render the texture in the viewport) *and* renders will be slower.

Same principle as before: only include as much detail as is needed, not more than that.



We now need to set the color of the image texture:

Finally, we should see the new color showing up in the viewport:



#### **Painting On Our New Texture**

Switch back to "Texture Paint". Clicking on "Active Tool" should show the Texture Paint options:



We can now "paint" on our donut:



You can paint on the texture (left window) **or** on the model (right window). Of course, it's usually easier to paint on the model!

**Tip**: You can use the same hot keys as you would for sculpting: "F" is *brush size* and "Shift + F" is *brush strength*.

You can use the "X" key to swap back and forth between a *primary* and *secondary* colors while painting. This can be handy when you're painting in more than one color.

After painting for an embarrassingly long time, I ended up with this:



## **Combining Image Texture With Noise Texture**

We want to combine our Image Texture with our Noise Texture so that we can keep the "bumpy" surface effects we worked on in part 7.

To do this, we need a new node called "MixRGB":



From the dropdown on the MixRGB node, choose "Overlay":



Play with the "Fac" slider until the Noise Texture and Image Texture are nicely balanced.

**Note**: The Image Texture's **Color** output should be fed into MixRGB, while the Noise Texture's **Fac** output should be fed into MixRGB.

## **Saving The Texture**

**Super important note**: Because we have added an Image Texture, a dialog like this one should show up when we exit blender:



**Make absolutely sure that box is checked before you exit!** If you fail to do this, all your texture painting work will be gone!