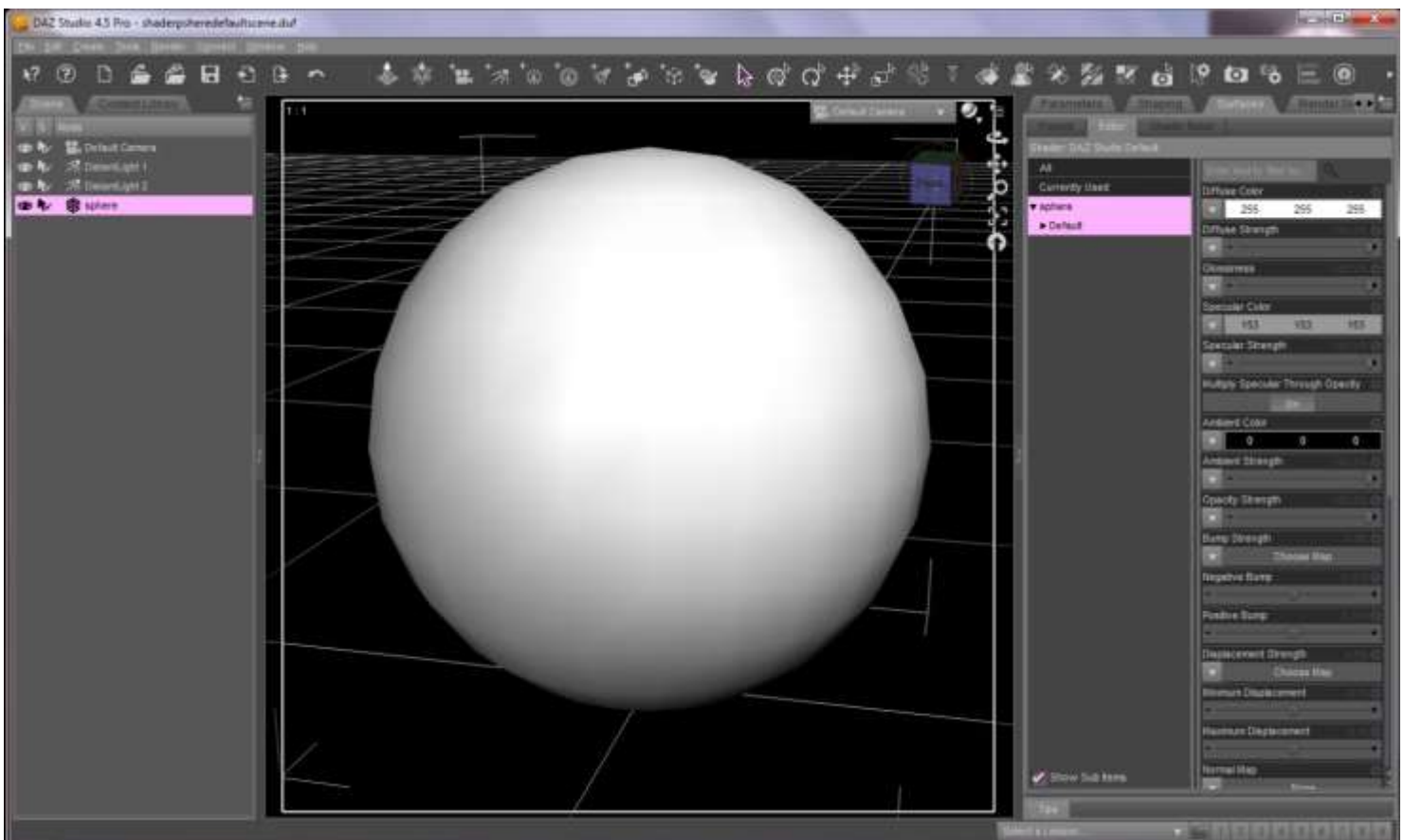


## DG Shader Essentials User's Guide

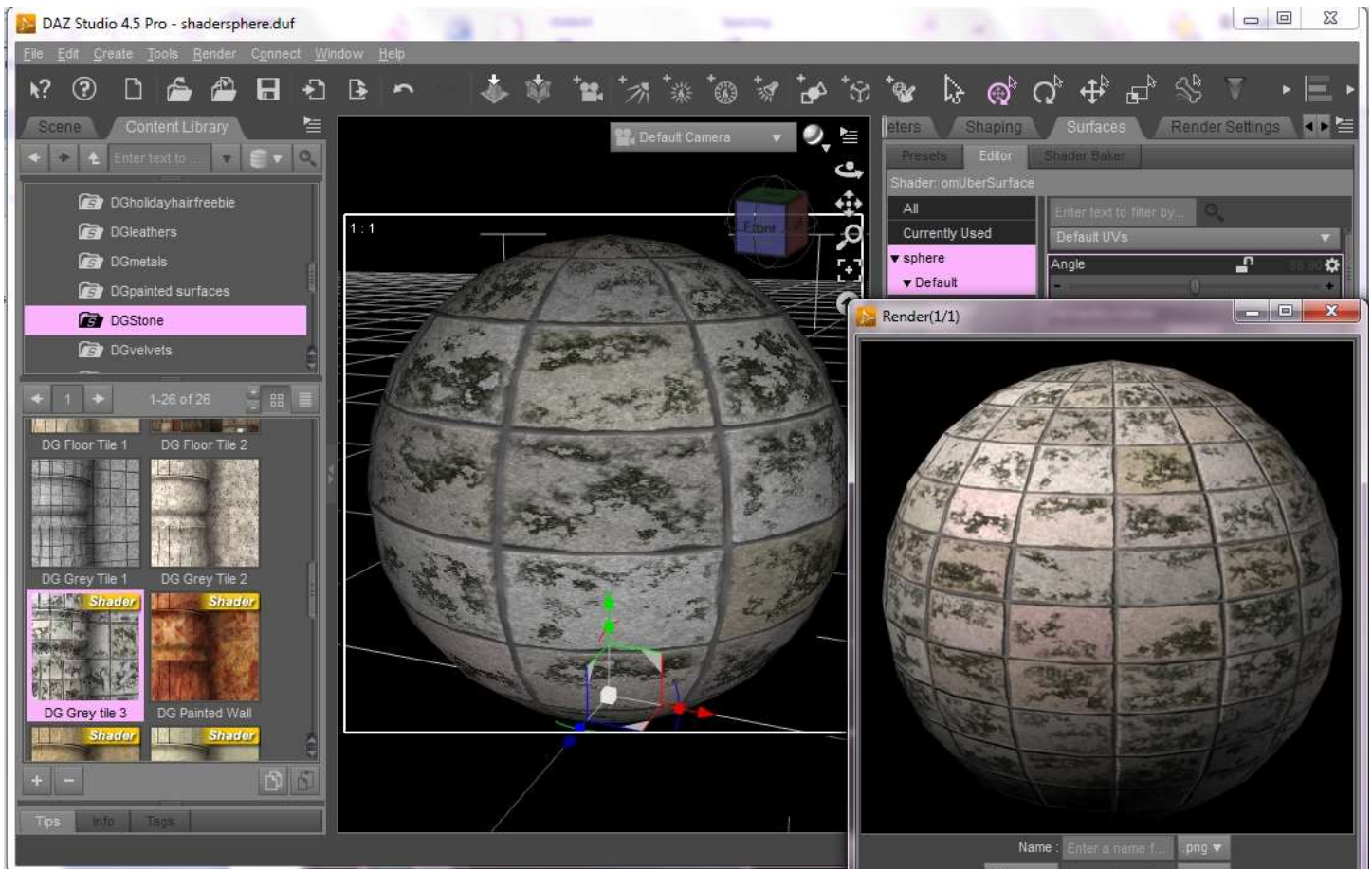
Thank you for purchasing DestinysGarden's Shader Essentials Pack. This shader set is intended to be a basic set of shader presets to get you started on your way to customizing textures using the power and versatility of shaders. Included are many of the most common types of textures we tend to use for 3D work like stone, wood, leather, velvet, glass and fabrics. I hope you have as much fun using these shader presets as I had making them for you. If you have never used a shader before, I'll get you started.

Shaders are a very powerful, yet super easy, way to change the look of any texture. Results will vary based on how many material zones are built into an object, and the manner in which the UV maps, or texture templates are laid out. I'll walk you through the basics of applying a shader to a surface and show some of the more common adjustments that need to be made to the surfaces depending on lighting and desired effect. We will be looking at some aspects of the DAZ default shader, and also Omnifreaker's UberSurface which has been included in DAZ Studio since version 3 pro.

Let's start small and work our way up. First, open up DAZ Studio and load a primitive sphere and add a couple distant lights. It is not possible to accurately judge how a shader looks using default lighting. On the scene tab select the sphere, and also select the sphere in the surfaces tab. This is the most important part of applying a shader. You will see over on the surfaces tab what shader is being applied to the selected object. In this case it is Shader: DAZ Studio Default.



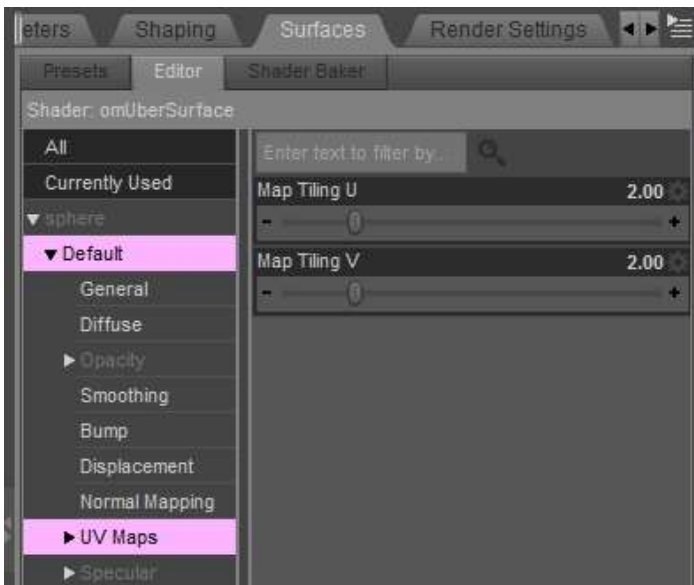
To apply a different shader, or shader preset, move over to your content tab, select the desired texture and double click it. I'm using DG Grey tile 3 as my example here. Be sure to render your scene to get a look at how the shader renders, as it can be very different from how it appears in the preview window. See screen shot below.



Really, that is all there is to know about how to apply a shader to an object in your scene. Dead easy, right?

You may have noticed the shader type changed to omUberSurface, because that is the base shader I used to set up my presets. Why does it look so different in the render than it does in the preview? The scale of the texture is determined by the size of the UV map from the original object, the size and scale of the shader tile, and a few parameters called Map Tiling U and Map Tiling V. We can't easily change how the object's creator set up the UV map, or the size or scale of the shader tile, but we can very easily change the numbers on a few parameters.

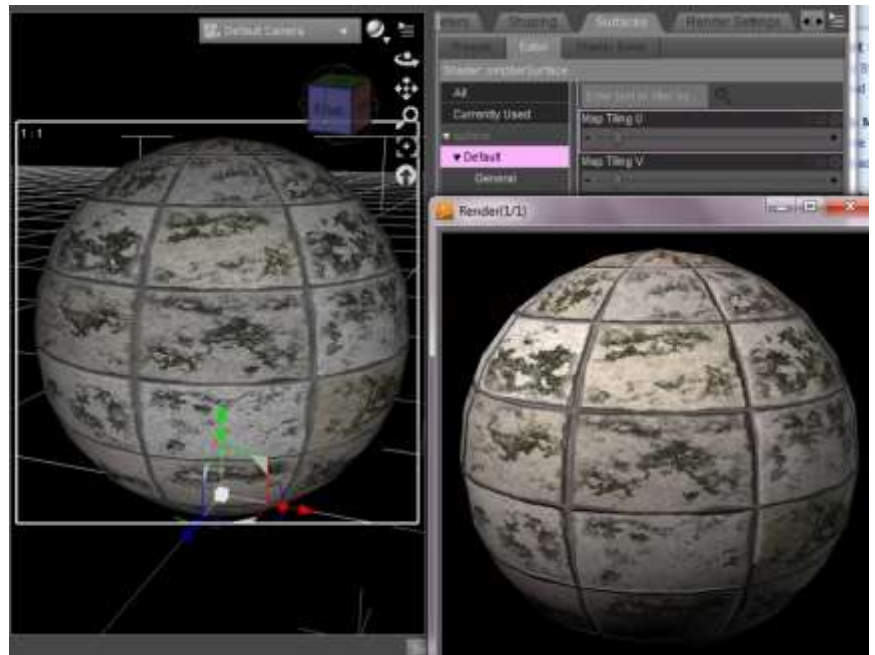
In the default view of the shader on the surfaces tab, you get a long list of all the properties built into the UberSurface shader. I strongly recommend playing around with these settings and doing test renders to see how the changes affect the surfaces in your picture. For now though, let's cut out the clutter and expand the menu under Default and scroll to UV Maps.

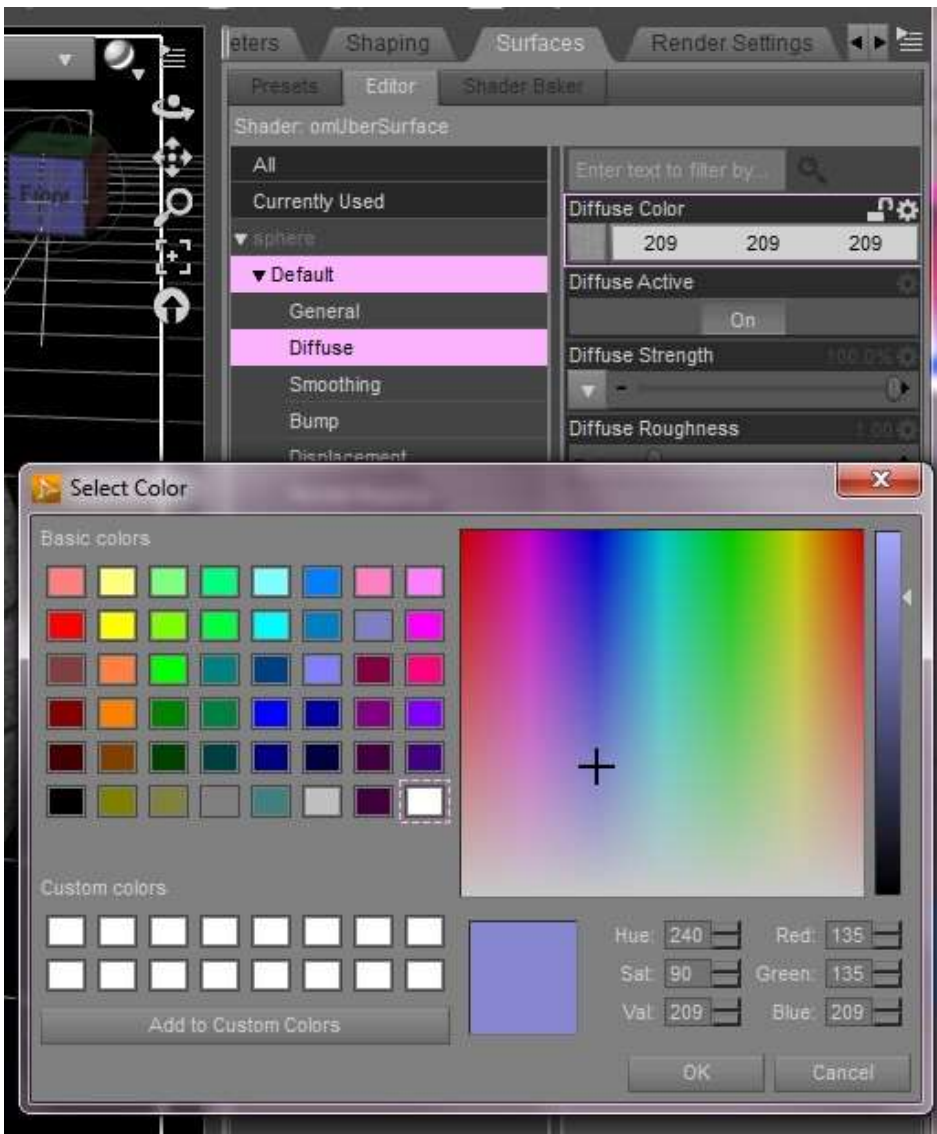


The Grey Tile 3 has a default tile set to 2. Why 2? No reason really. Based on the scale of the texture tile, I thought it worked best with the surfaces it would most likely be used on. Since it is not possible to predict what surfaces a shader will be used on, and the scale of the UV maps, the tiling number is arbitrary as it will have to be adjusted anyway based on the scene requirements. Change the number on each of these to 1, render, and see what happens.

You see that the render now matches the preview because we changed the ratio of the tiling 1:1 or full scale, or 100%. If you change the tiling to 2, the pattern is now 1:2 or 50% scale. Change the tiling to 5, 1:5 ratio or 20% of the original size. Here is a little row of renders with the tile value set from 1-5. As you can guess, the closer you move the tiling number to the highest value of 10 or 1:10, 10% of full scale, the smaller the pattern will become.

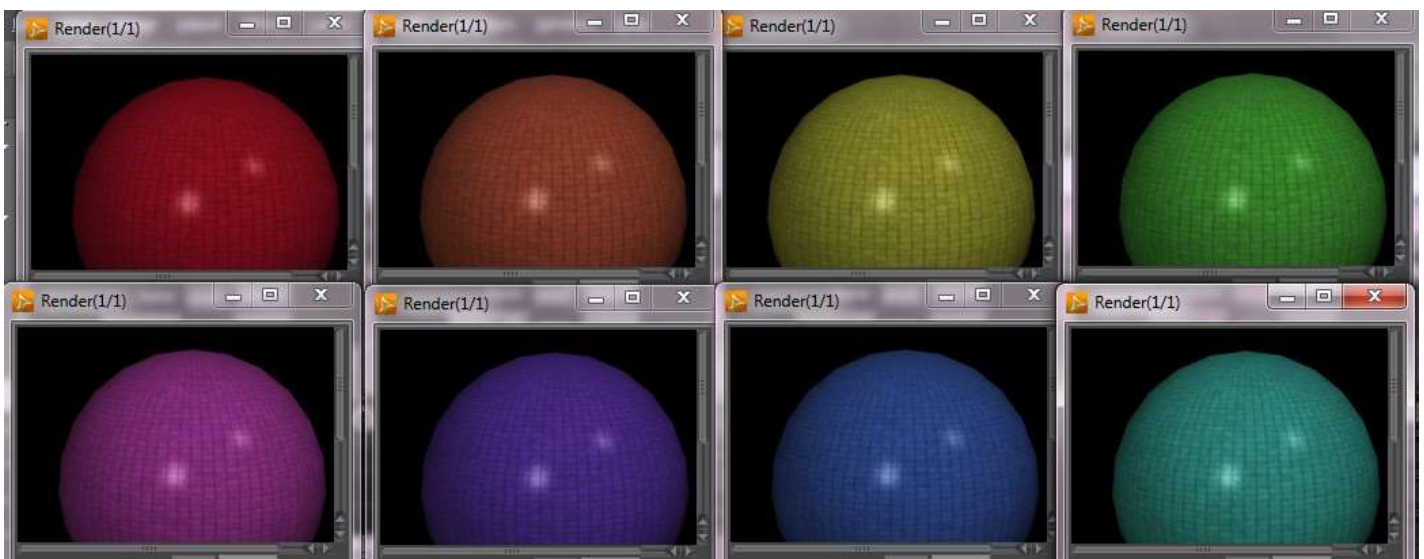
Note: changing the tiling value affects all image maps that are applied to the item, including opacity, bump, displacement, diffuse, etc.





**Diffuse:** That is it for the math stuff; let's look at a more fun parameter. Go back to the blank sphere scene and apply one of the grey tiles in the stone folder. I'm using DG Grey Tile 1. It's nice and utilitarian. Want to spice it up? The diffuse channel gives the biggest bang for the buck. Back to the surfaces tab, find the diffuse option and click on the color bar. The color picker window will open up and you can choose any color you like to match your scene.

By utilizing this option you have complete flexibility, and are never limited to included color presets. Here is a little row of renders to illustrate the point. The only thing that changed was the color in the diffuse channel.



**Bump** is another common setting that is largely dependent on the scene, lighting, and how close the camera is to subject. For a default, the bump settings have been saved for a relative close up in medium light. For a more far away subject you may want to increase the Bump Strength percentage. For an extreme close up or very bright light, you may want to adjust the bump percentage to a lower value. If the texture has jagged edges or pock marks in the render, the Bump strength should be lowered.

**Displacement** will also change how rough the texture appears in the render, but it is different from Bump in a very important way. Displacement will actually move, or displace the mesh before rendering. Again, increase the Displacement Strength percentage to get a more rough appearance, decrease for a more smooth appearance. If you notice poke through happening in your render, that did not appear in the preview window, check to see if lowering the displacement takes care of the problem.

### Additional Product notes:

**Opacity:** Opacity is a tricky parameter. As a rule, I do not record opacity settings when saving a shader preset. The reason for this is if there is an opacity map applied to the item, it would be overwritten when the shader is applied and the user would have to manually track it down and reapply it to get the correct result. The exceptions to this rule are the glass shader presets. By their nature, those have to be saved with an opacity setting to get the correct effect. The difficulty lies when you may apply a glass shader to an object, which would reduce the opacity, and then change to a wood texture for example. The wood will now have the same opacity setting that the glass did. You will want to locate the opacity slider on the surfaces tab and reset it to 100% in this instance. If there is an opacity map on the object the U and V tiling must be set to a value of 1, or the opacity map will also be tiled and you will end up with transparent holes in your object in unusual places.

**Additional note on the glass shader presets:** The glass presets have many settings turned on or off specific to getting the correct glassy look. If you try to make an item with a glass preset applied invisible by turning the opacity slider to 0.00% it will disappear in the preview window, but it will still show up in the render. A work around is to use the “eye” in the scene tab to make the geometry invisible, or apply a different shader to the desired material zone, and then turn the opacity to 0.00%.

**Promo renders:** All items in the promo renders, with the exception of hair and skin textures, were created using the shader presets in this package. The lighting used in all promos is InaneGlory’s Ring of Light.

