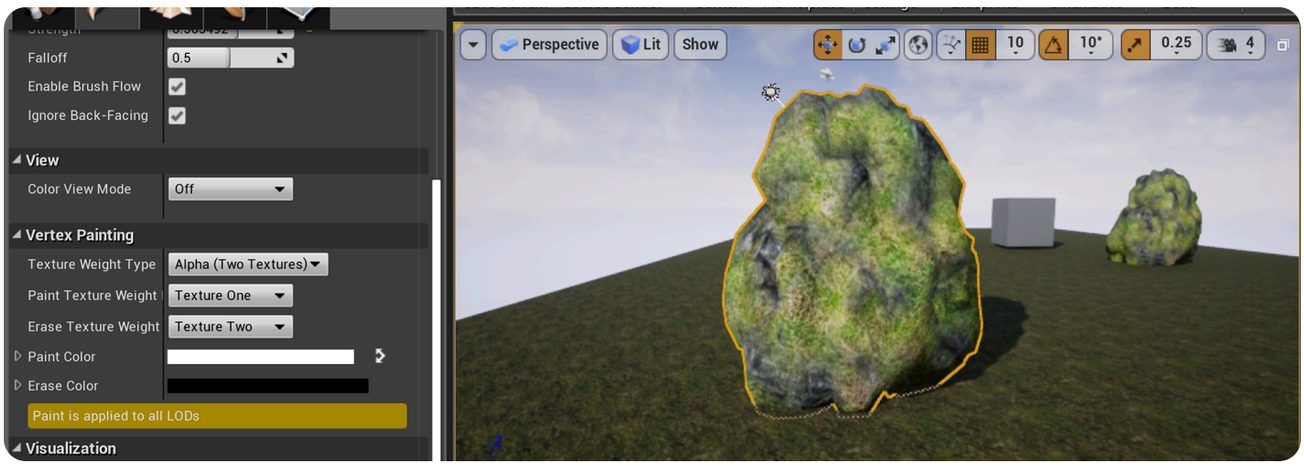
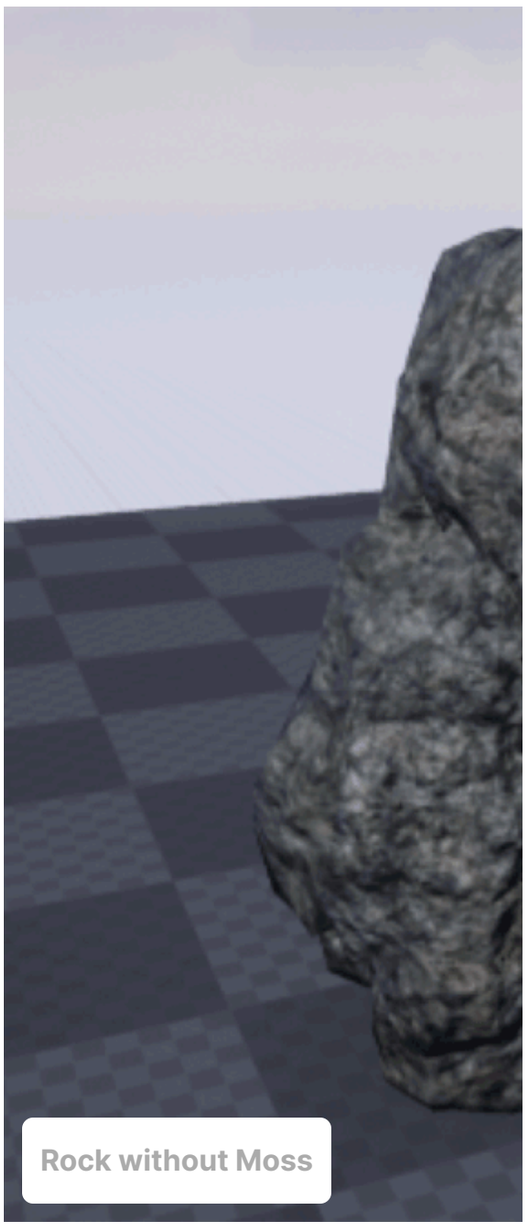
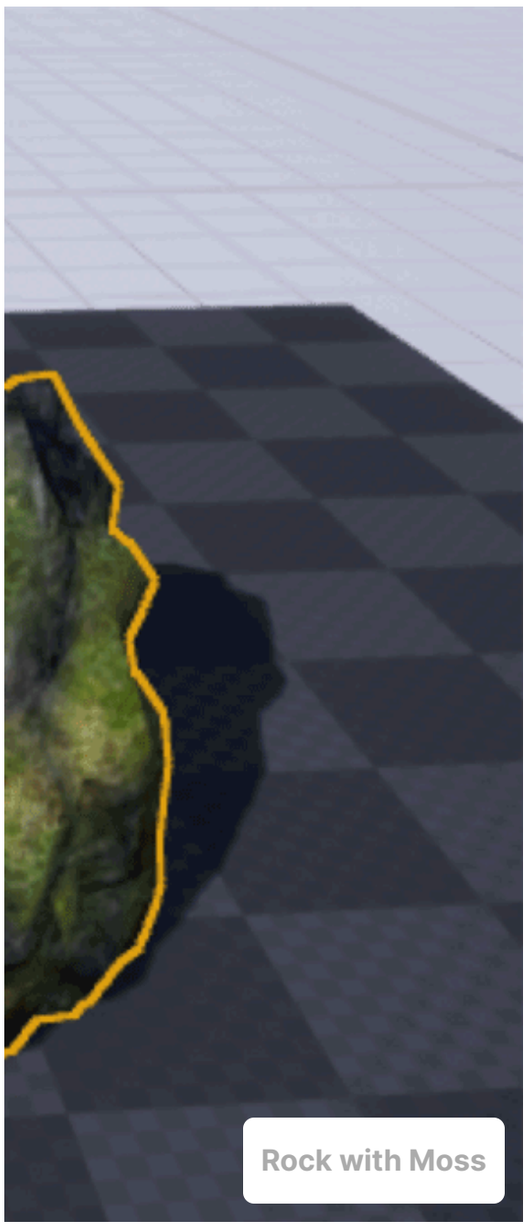
How To Create a 2-Texture Material for Vertex Color Painting

This page shows you a specific example of how to create and use a Two-Texture Material for use with vertex color painting on Meshes.



Vertex Color Painting is a powerful tool, and there are many ways to use it. The Create a Material for 2-Way Texture Blending page gives a basic explanation for how to set up a Material for blending textures with vertex color painting. This page provides a more concrete use case for this technique. This document demonstrates how to create a two-texture Material for vertex color painting, that blends a rock texture and a moss texture. Once you've created this blended texture, you can use Mesh Paint Mode to paint this texture onto any mesh in your level. You can adjust the settings in the Mesh Paint Mode panel to increase coverage or decrease it, so that the texture is variable across the mesh.

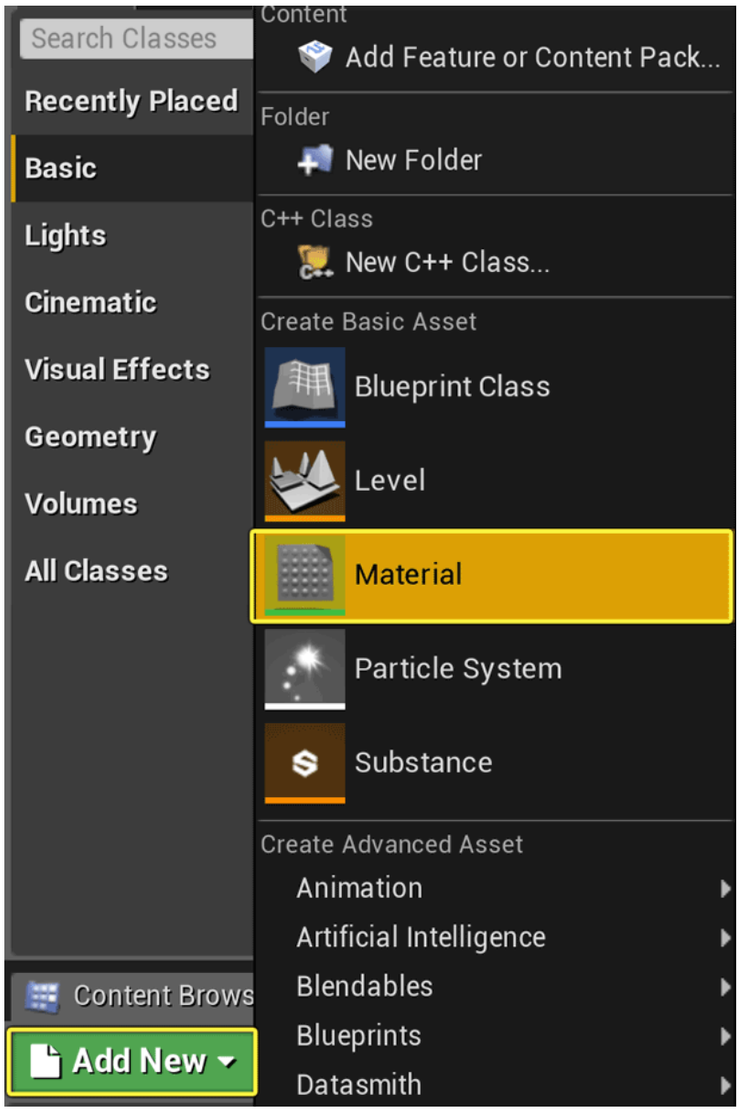




Steps

Create the Material

1. In the Content Browser, click **Add New > Material**.



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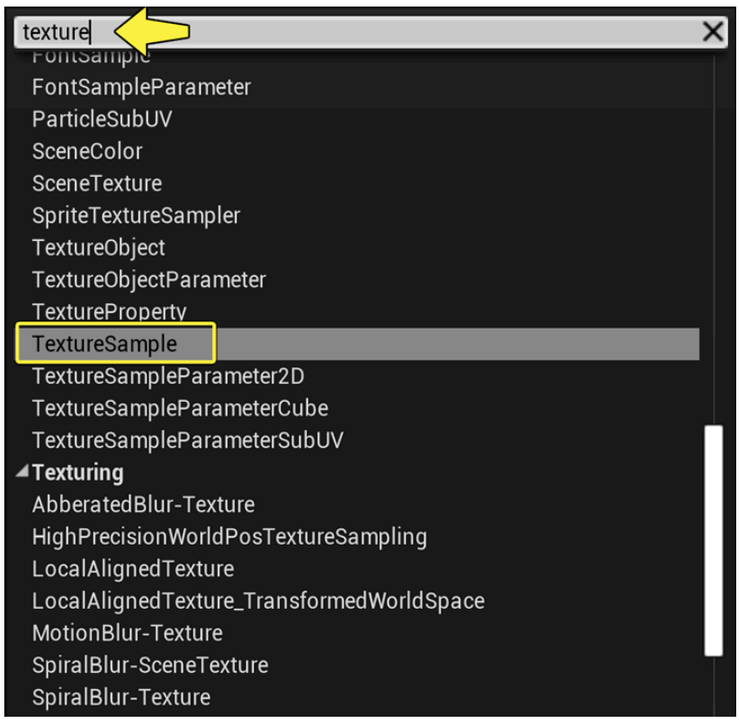
2. Name your new material. In this example, we are using **M_2TextureMoss**.

3. Double-click the new Material to open the Material Editor.

Create and Set Up TextureSample Nodes

1. First we need to add a texture. Right-click in the graph, and in the search bar type `texture`. In the list of results, select **TextureSample**. This adds the **TextureSample** node to the graph.



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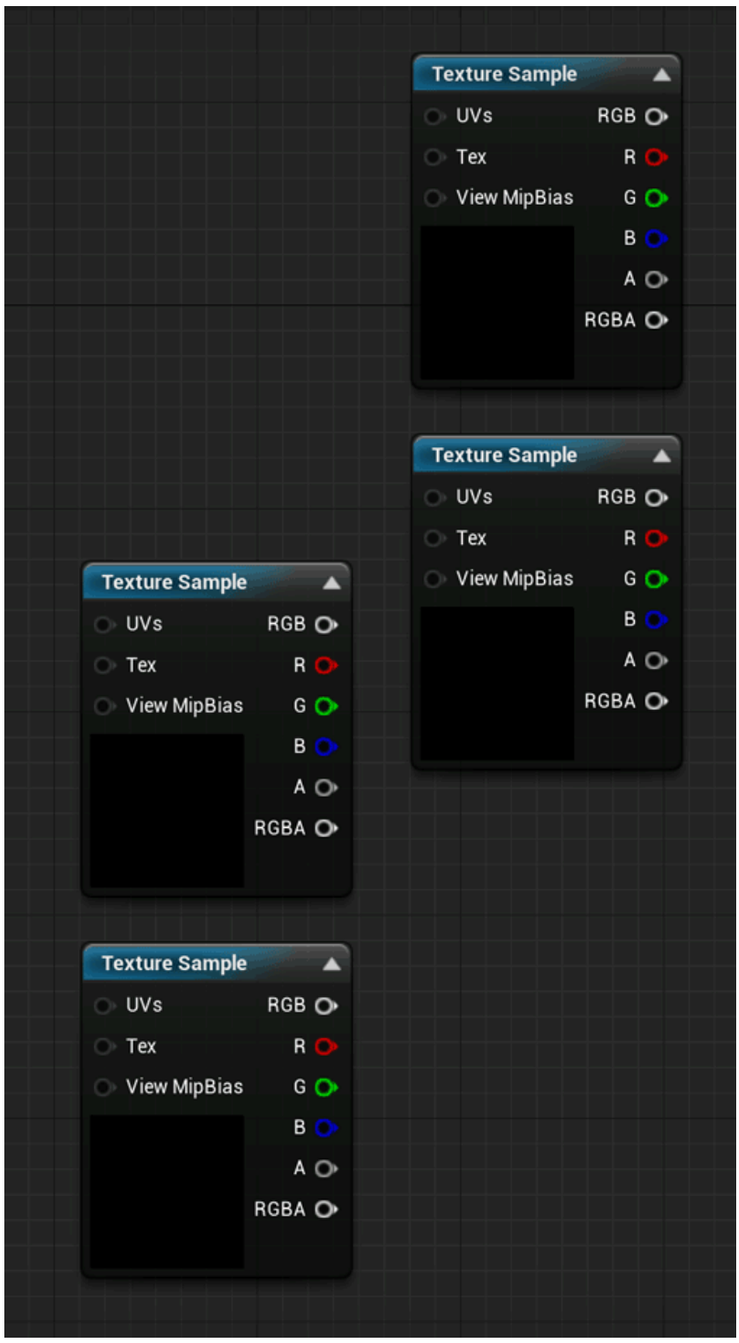
2. We need four for our example, so copy the TextureSample node and paste it three times so that you have a total of four TextureSample nodes.



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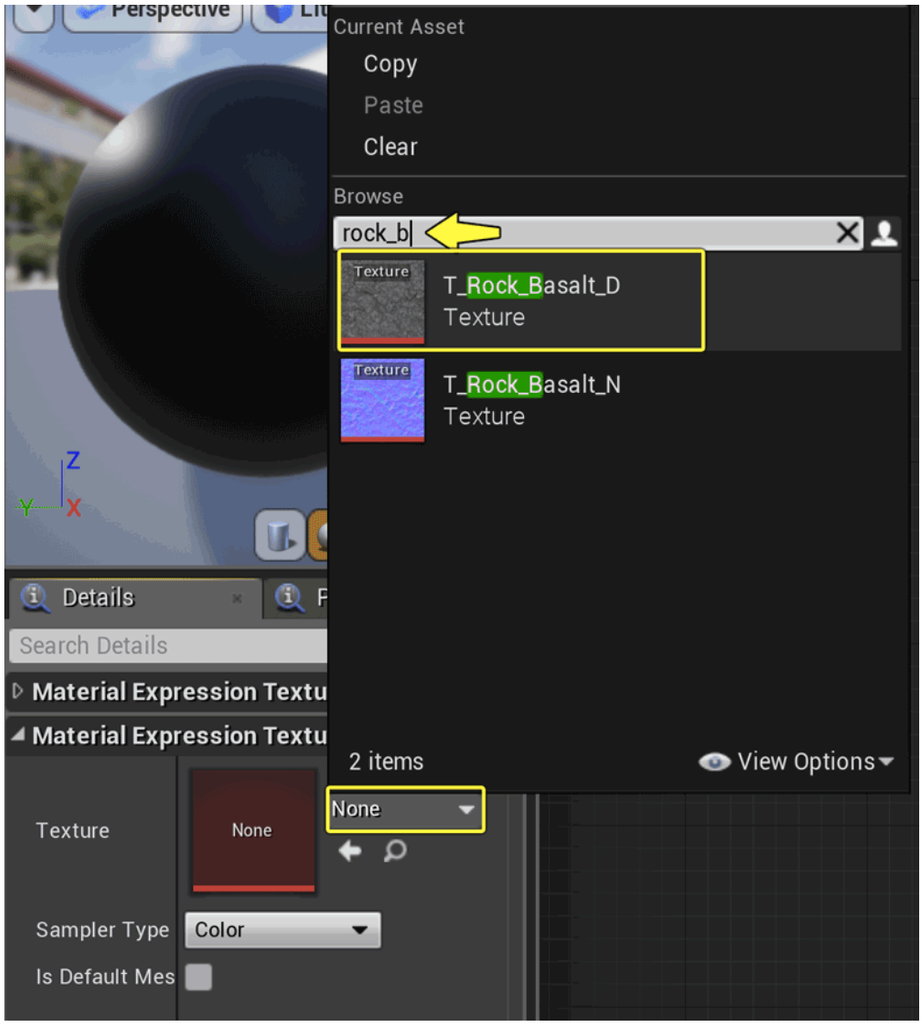
3. Position the nodes so that two are together near the top of your graph, and two are together toward the bottom of the graph. This will make them easier to distinguish from each other, and make things more organized.
4. First we'll select our **Diffuse** textures. Click one of the top TextureSample nodes. In the **Details** panel on the left, locate the **Material Expression Texture Base** section. For the **Texture** property, click the dropdown to select a texture. In the search bar, type in `rock_b`. In the results, select **T_Rock_Basalt_D**.



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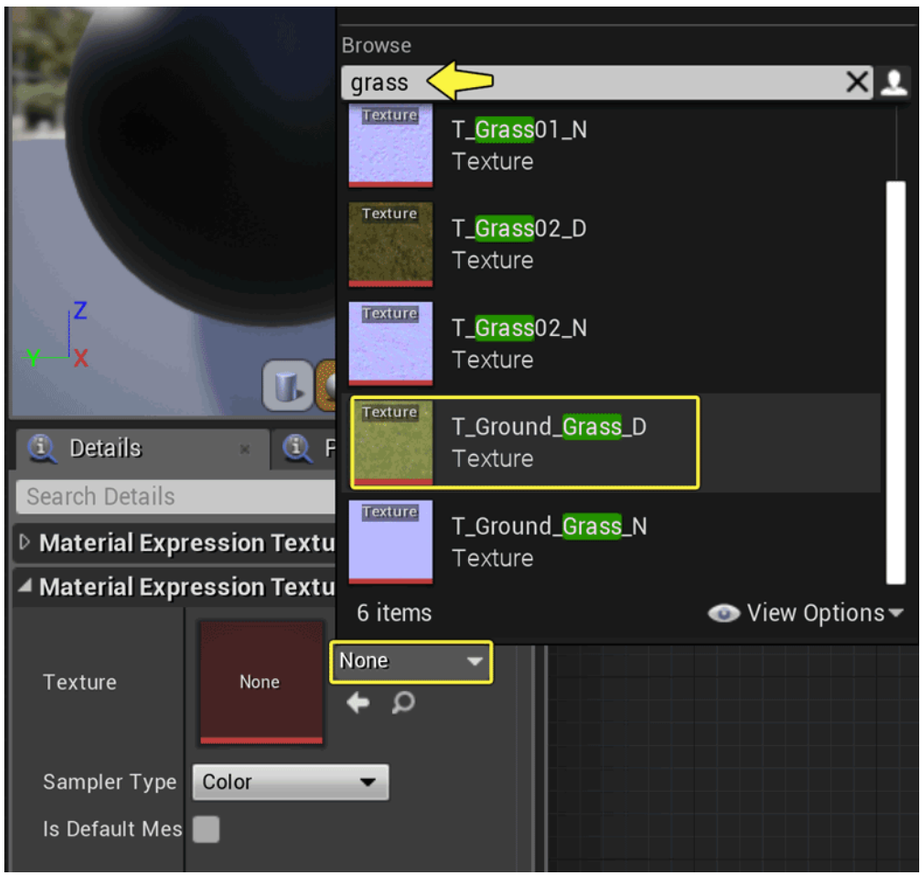
5. Click on the second of the top TextureSample nodes. In the Details panel, click the Texture dropdown, and in the search bar type `grass`. In the results, select **T_Ground_Grass_D**. This is the second of our Diffuse maps.



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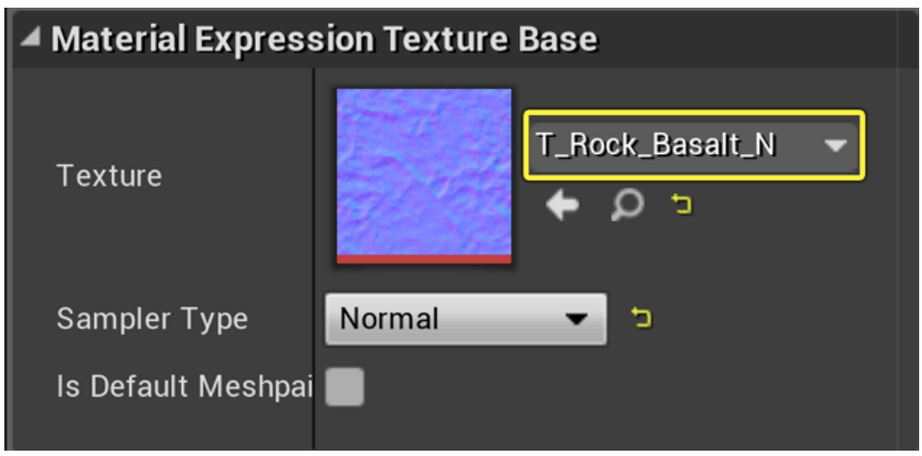
6. Now we need to select our **Normal** maps. Click the first of the lower TextureSample nodes. In the Details panel, click the Texture dropdown and type in `rock_b` again. This time, select **T_Rock_Basalt_N**. This is the Normal map that matches the Diffuse map we selected in steps 4 and 5.



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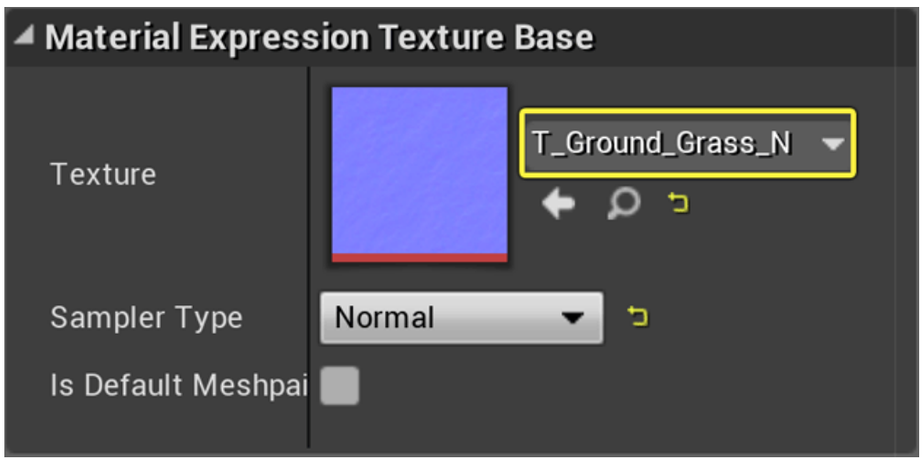
7. Click the last TextureSample node, and in the Details panel, click the Texture dropdown and type in `grass` again. In the resutls, select **T_Ground_Grass_N**.



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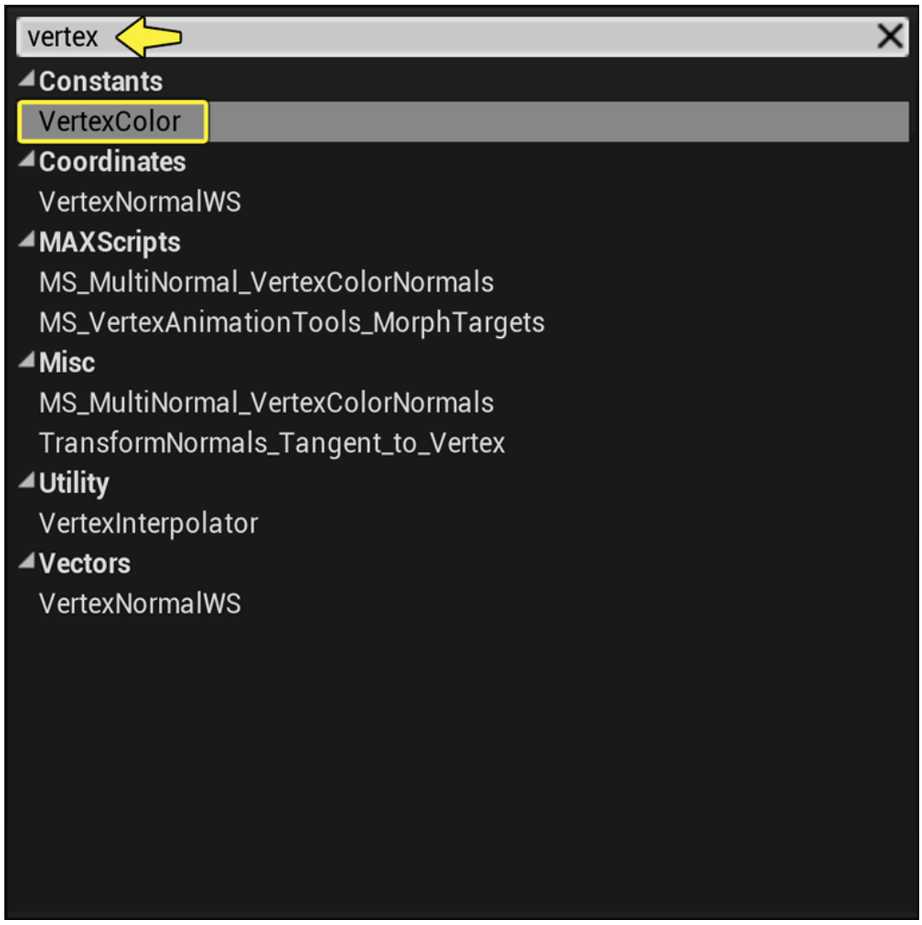
Add the Vertex Color and Linear Interpolation Nodes

1. Now we'll add the Vertex Color node. Right-click in the graph, and type `vertex` in the search bar. In the results, select **VertexColor**. When the VertexColor node is added, notice that it is a red Input Data node.



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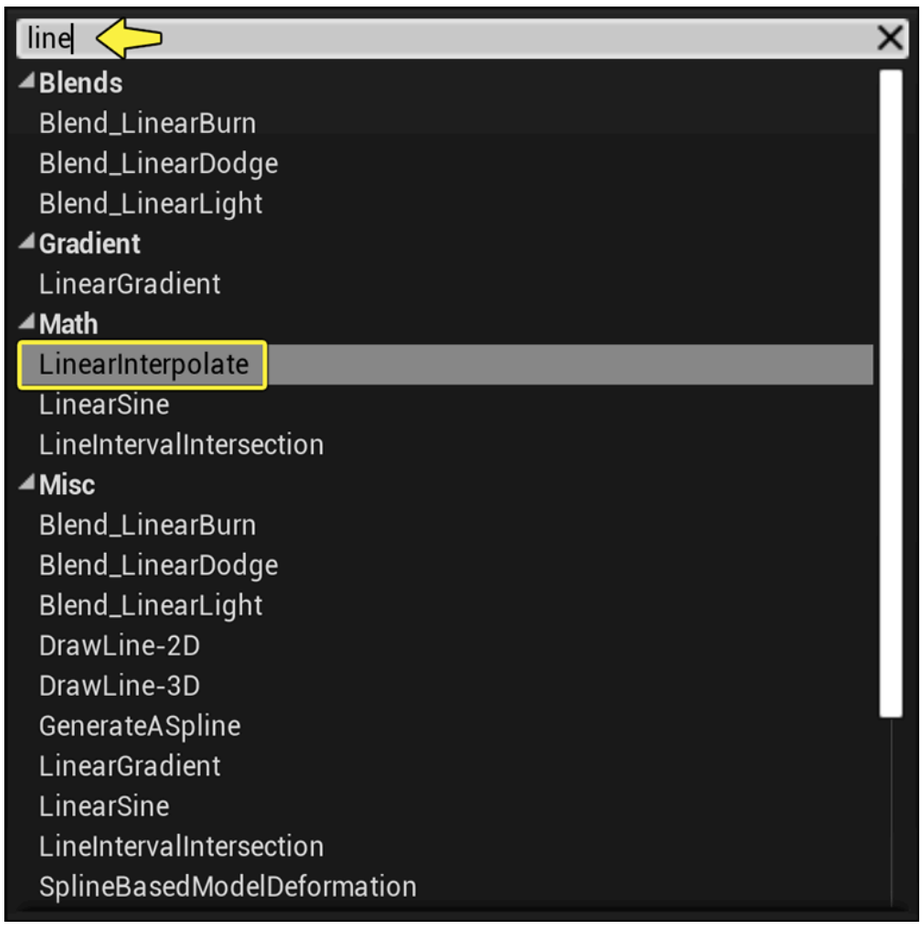
2. The VertexColor node will combine the two Diffuse maps based on a linear interpolation, or *lerp*. Right-click the graph and type `linear` in the search bar. In the results, select **LinearInterpolate**. This places a **Lerp** node on the graph.



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3. We need two, so copy the first Lerp node and paste a second one on the graph. One is for the Diffuse maps, and the other is for the Normal maps, so position the Lerp nodes accordingly.

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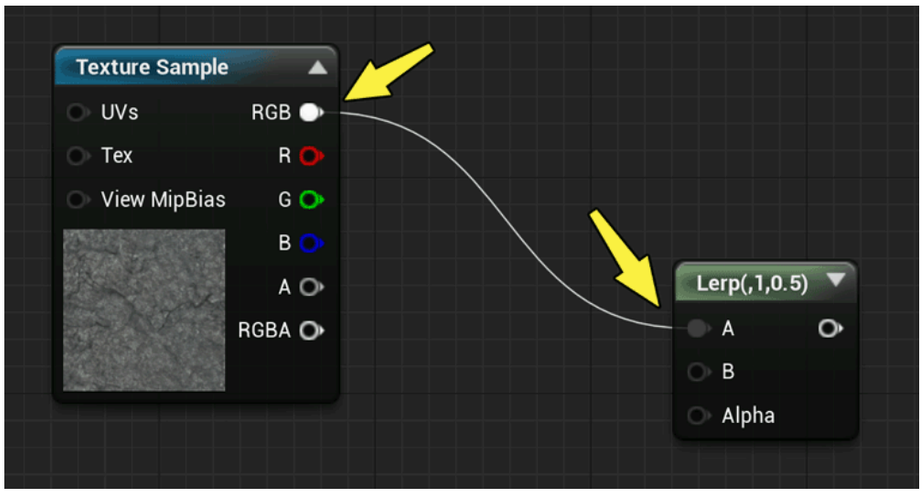
4. On the Rock Diffuse map, drag off the **RGB** output and connect it to the **A** input on the first Lerp node.



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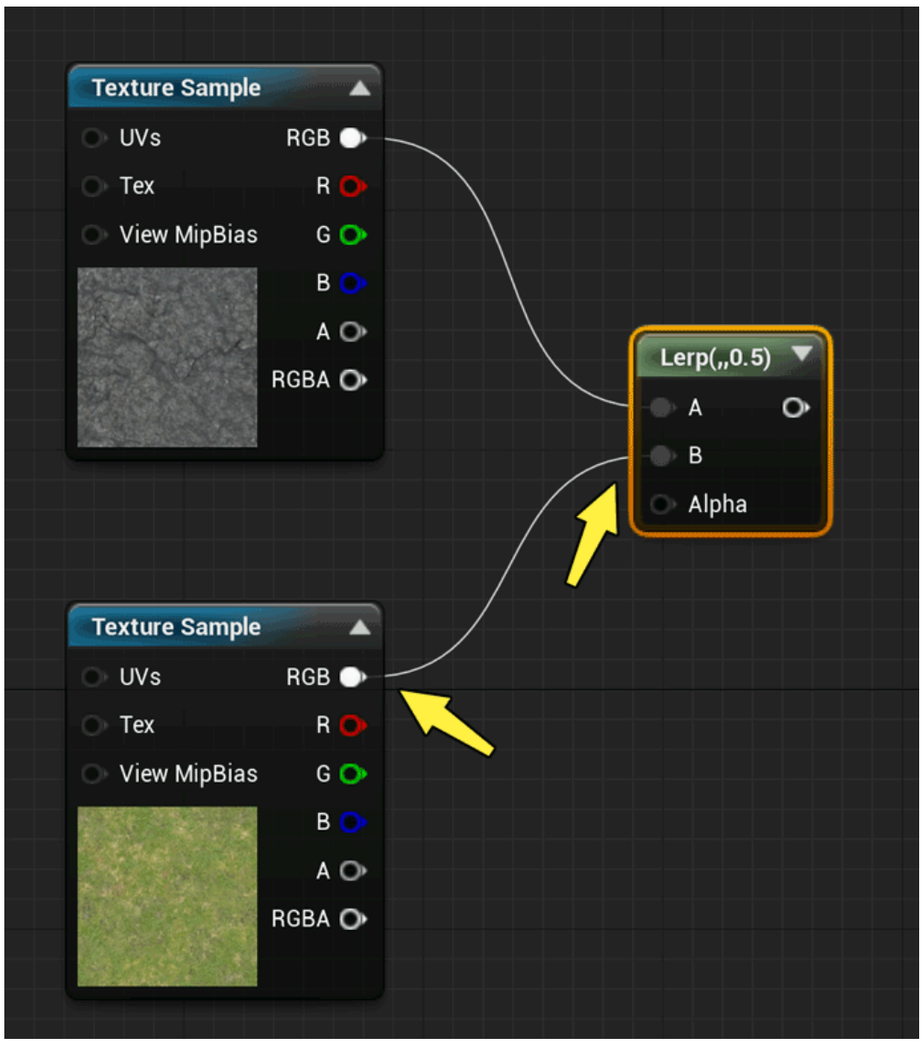
5. On the Grass Diffuse map, drag off the **RGB** output and connect it to the **B** input on the first Lerp node. Both your Diffuse maps are now connected.



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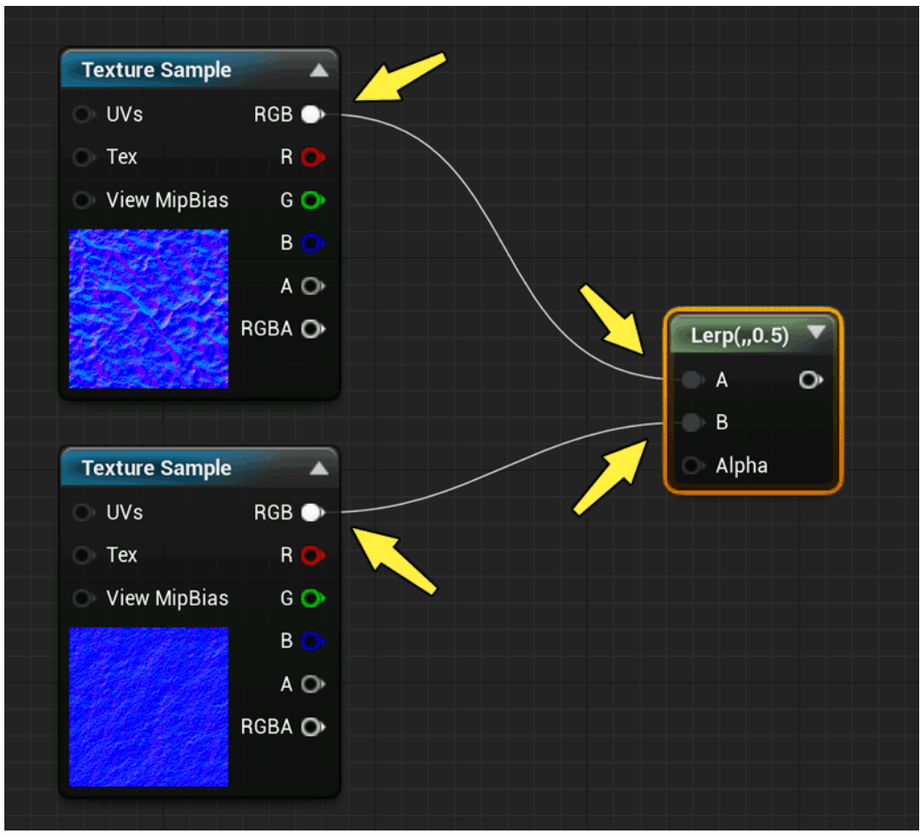
6. On the Rock Normal map, drag off the **RGB** output and connect it to the **A** input on the second Lerp. On the Grass Normal map, drag off the **RGB** output and connect it to the **B** input on the second Lerp node. Both your Normal maps are now connected.



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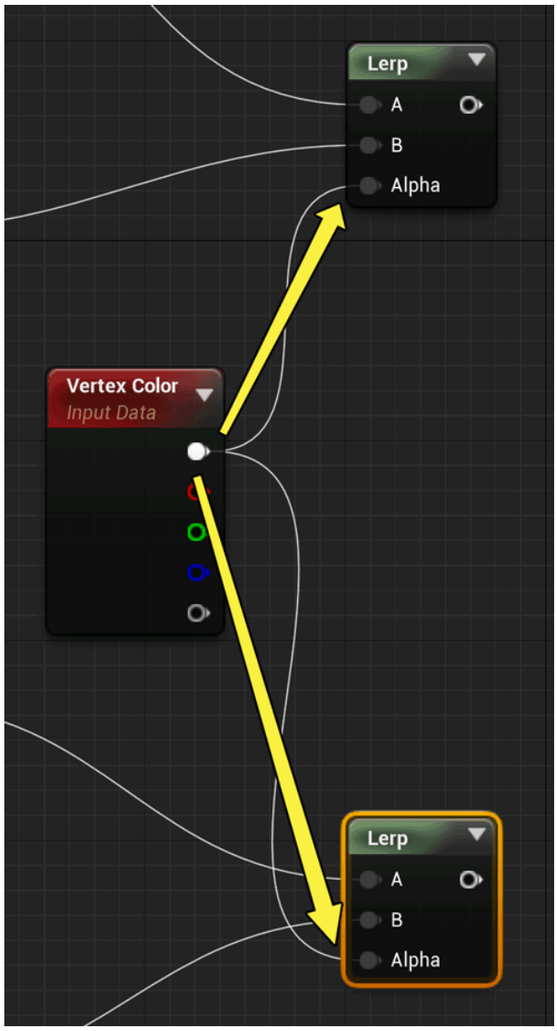
7. The **Alpha** input on the Lerp nodes is the variable that controls the mixture of the Rock and Grass textures. The VertexColor node is going to control the Alpha value, so drag off

the top output on the VertexColor node and connect it to the Alpha input on the Diffuse Lerp node, then do the same again for the Normal Lerp node.



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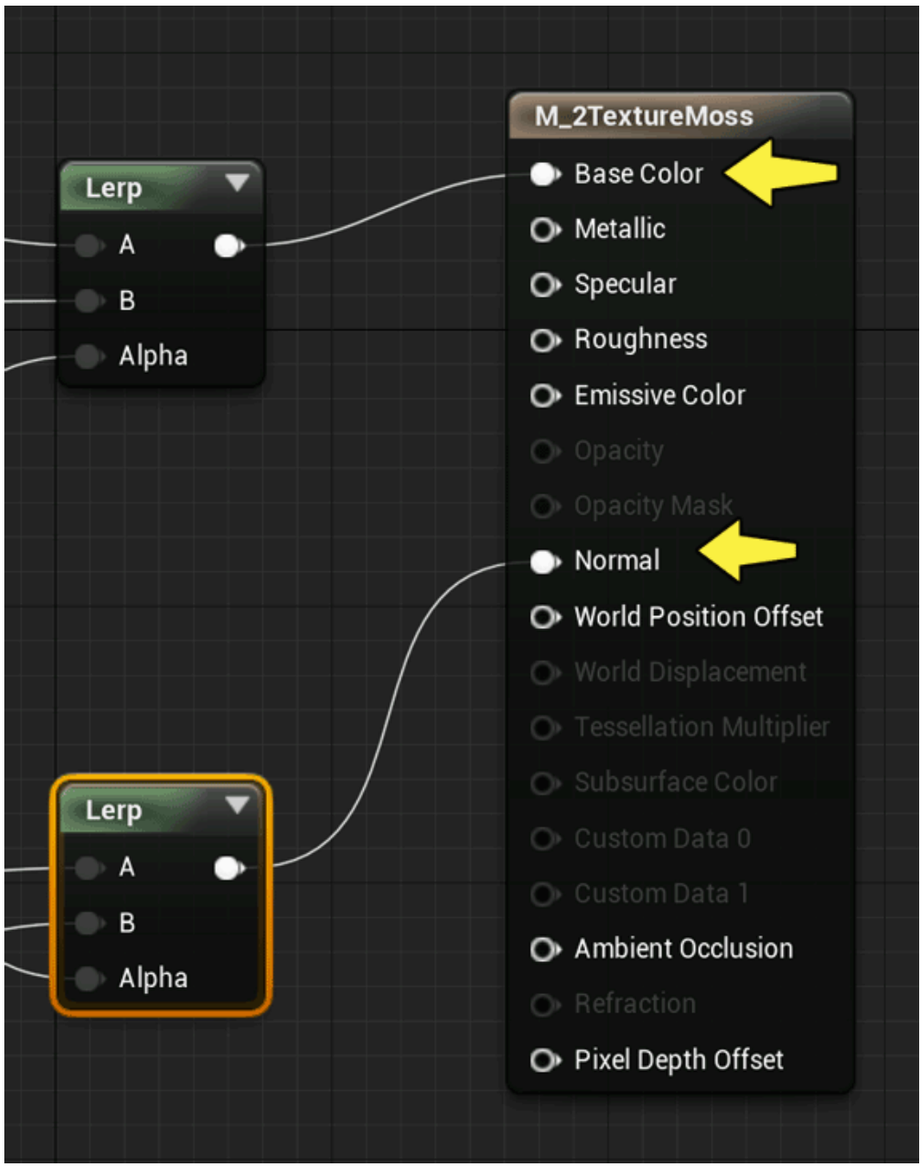
8. Now drag off the output of the Diffuse Lerp node and connect it to the **Base Color** input on the Material node. Drag off the output of the Normal Lerp node and connect it to the **Normal** input on the Material node.



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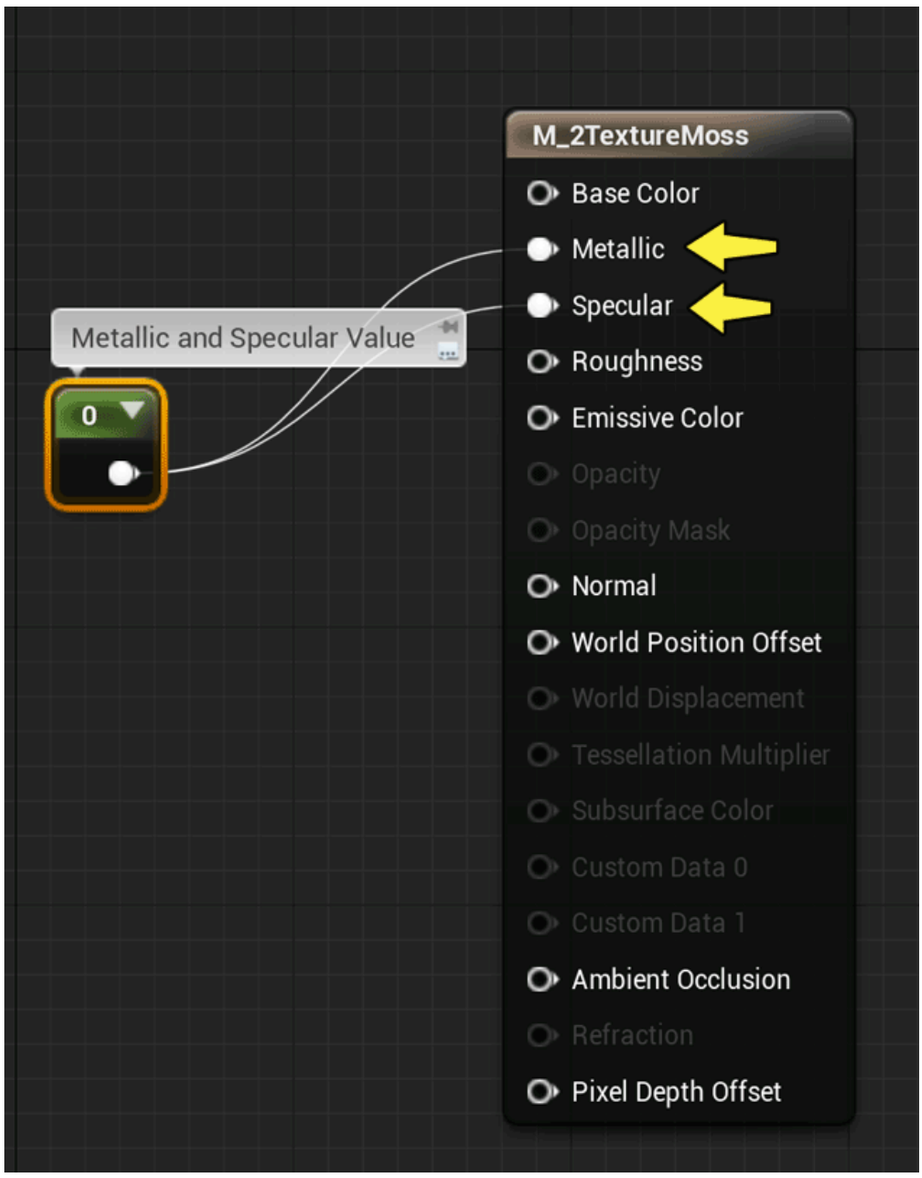
Set Up Remaining Material Properties

1. Now we'll set the remaining properties on the Material node. Drag off the **Metallic** input on the Material node, and in the search bar type in `constant`. Select **Constant** to add a Constant node. Leave the value at the default of **0**.



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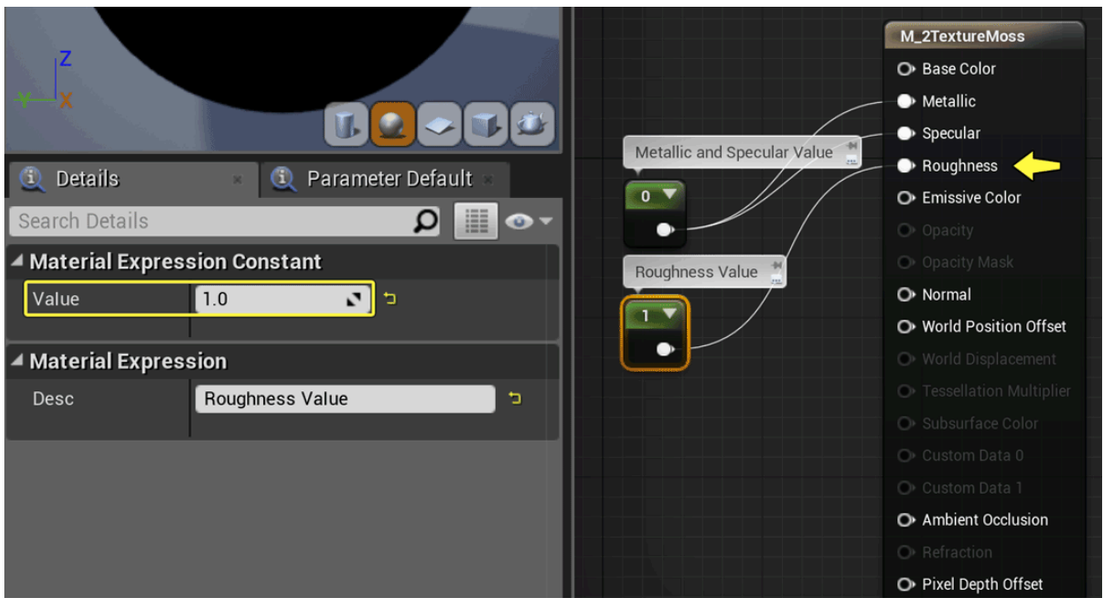
2. We also want the Specular value to be 0, so connect the **Specular** input on the Material node to the same Constant node we made in step 1.
3. We want the **Roughness** value to be higher than 0, so copy-paste the original Constant node to create another one. Connect the **Roughness** input to the second Constant node. Select that Constant node, and in the Details panel, set the value to **1**.



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Final Result

Now we have a Material that we can use with Vertex Color painting to paint a texture on our mesh. You can adjust the **Strength** setting in the **Brush** section to vary how much of your moss texture is painted onto the mesh. You can adjust the **Radius** setting up or down, depending on whether you need to paint large sections or small details. You can adjust the **Falloff** setting to create a hard edge to your texture, or to have it fade out gradually.