



Blender + Zbrush

Character Creation Series

Part Seven: Finishing the Scene



Table of Contents

Forward	3
Basic introduction to Part Seven	
Setting Up The Scene	4
The basic layout	
Render Layers	6
How to split your render up for editing	
Making it Snow	8
How to create snow using textured planes	
Composite Nodes	9
Using nodes to edit your image	
Lighting Layers Using Nodes	10
How to dramatically change the mood of your image using nodes	
Blur Effects	11
Using nodes to add blur effects	
Enhancing Color	13
Using nodes to adjust the color of a scene	
Video Companion	15
A hyperlink to a video companion for Part Six	
Index	18

Part Seven Finishing the Scene

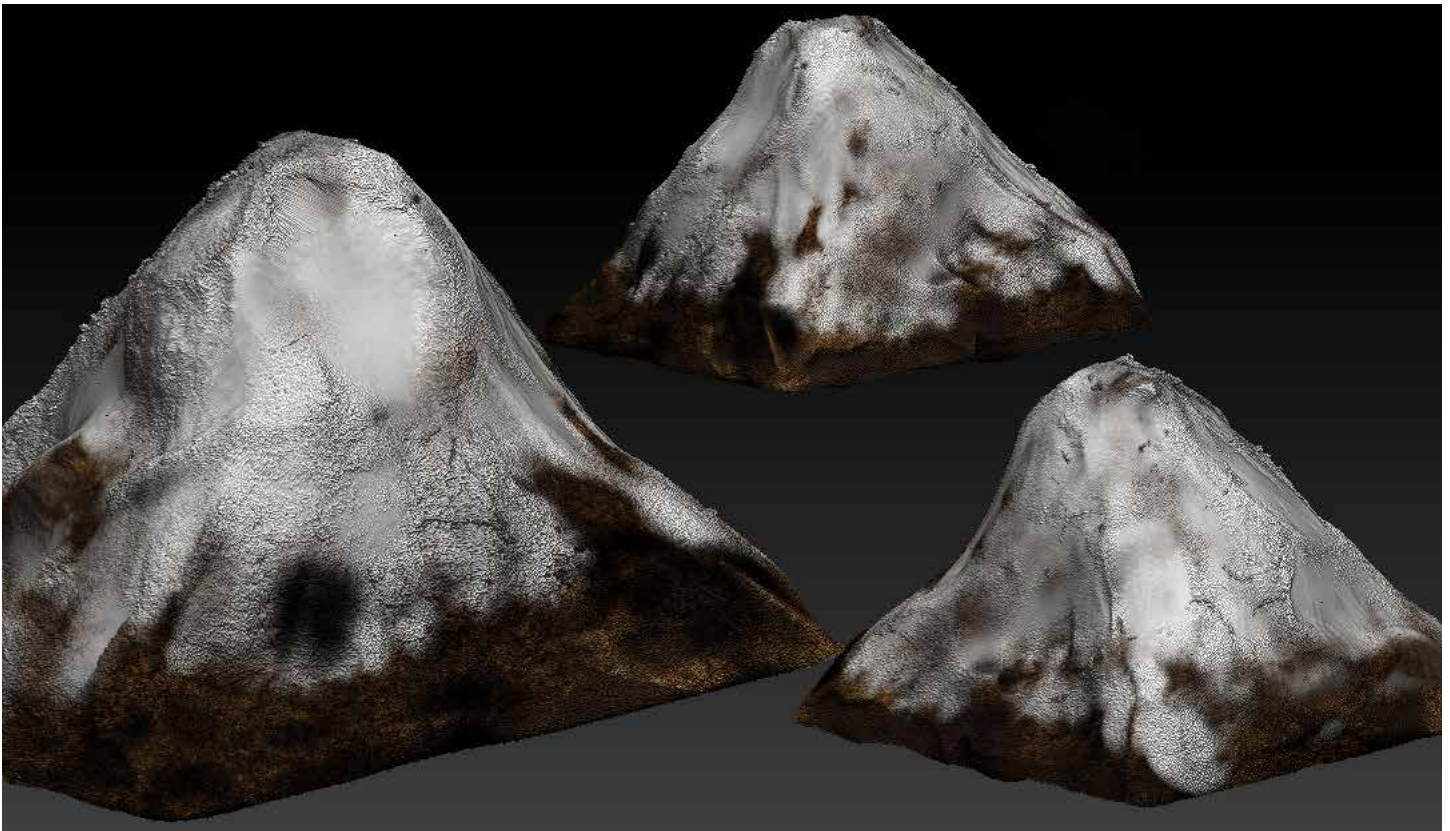
Forward

In the seventh and final part of this tutorial series we'll dissect the final rendered image. You'll also learn a few tips and tricks to polish your final render/animation using the composite editor.



Setting Up The Scene

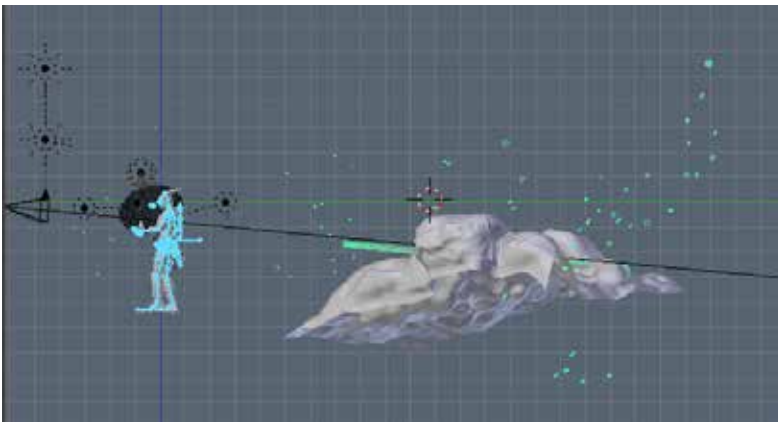
First you need to decide what kind of environment you are going to make. This could be anything, even something that doesn't really exist. For this scene, I chose to create the look of snowy mountains in the distance, as if the character has been on a long journey. To do this I created a couple base meshes around the character for the ground, rocks, mountains etc, and sculpted and painted them in Zbrush using the same methods discussed previously in this series.



This is all the same mountain, rotated and scaled differently, so it appears to be different mountains. Tricks like this can be used to simulate variation in the landscape.

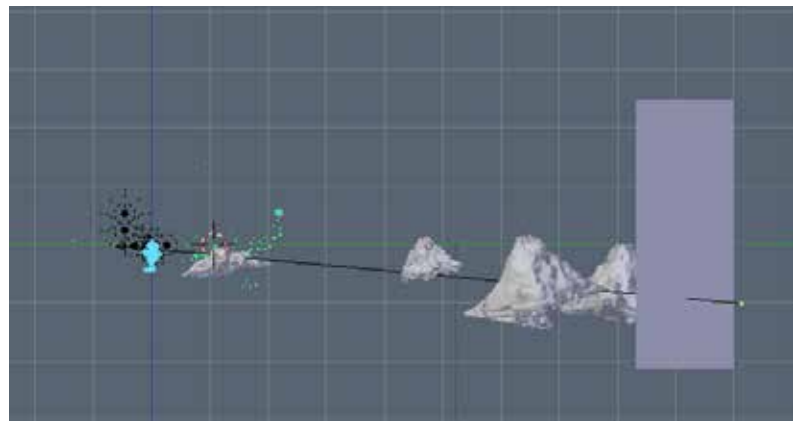
Setting Up Continued

Something to always keep in mind is that if something is not going to be seen you don't need to make it. If it will never be on camera you are wasting your time creating it. Let's take a look at my scene in Blender.



On the left here is a side view of part of the scene. As you can see, the character is placed in front of the land mass, not on it, even though the camera angle makes it look like he is standing on it. The green planes floating in the air is the falling snow. Some is placed strategically in front of the character and behind so it appears that he is surrounded by falling snow.

Pictured on the right is an entire view of the scene. You can see the mountains floating in the background. On camera however, you cannot tell they are floating, they just appear to be mountains in the distance. As you can see, there is no need to model what you can fake. This is a trick that is done frequently in Hollywood movies, with real set pieces.



The big square floating on the far right is the sky. The sky in this image was a separate scene rendered as an image. By using an image of another scene I can cut down the render time of this image (which took over 4 hours!) If you're wondering about the sky image, the planets were modeled with spheres and textured with images from NASA. This is a technique I picked up from a tutorial at www.BlenderGuru.com.

Render Layers

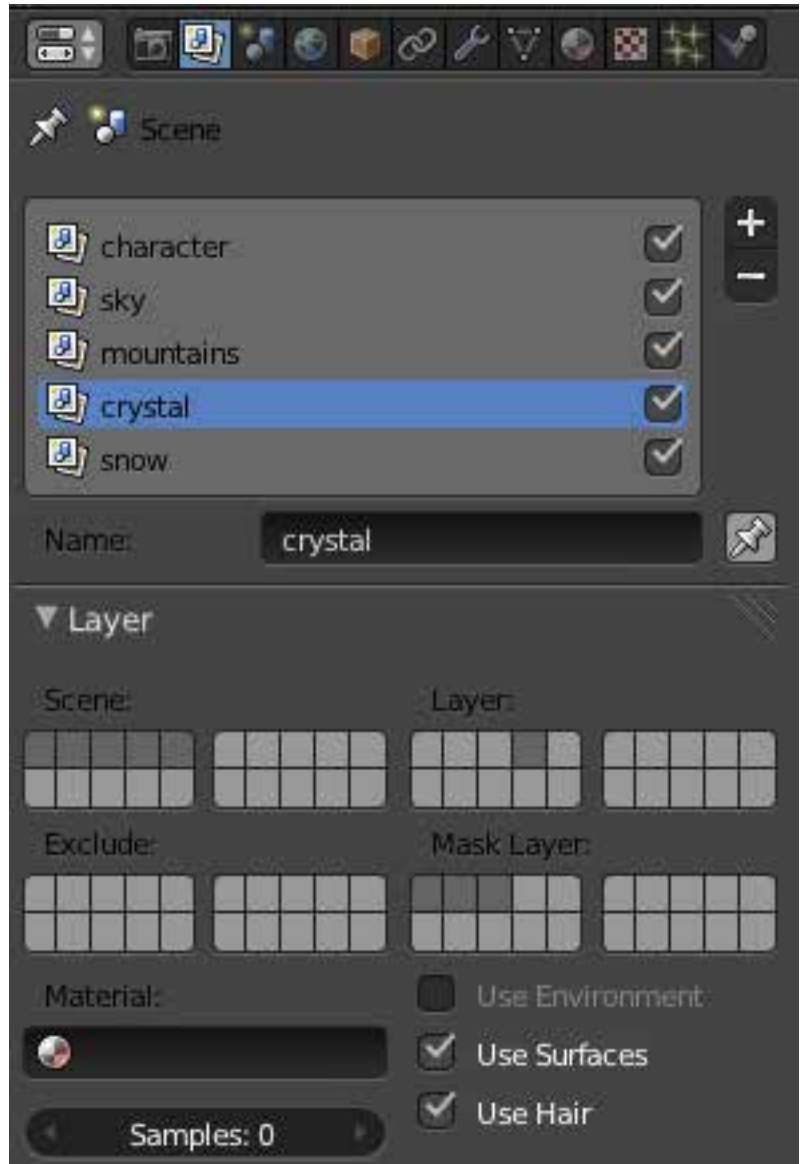
Sort of like layers in photoshop, Render Layers allow you to edit separate layers in Blender. For example, when using the composite editor, changes made to one layer will not effect all of the layers. A lighting set up on one layer will only effect that layer.

As you can see I used 5 layers for this image. The character layer, sky layer, mountain layer, crystal layer, and the snow layer are all separate.

1. Select an object in your scene, and press “M.” A box will appear, similar to the boxes shown on the right. These are your layers, select one to place that object into that layer.

2. Light the layer, any lights in that layer will only effect that layer. If you want your original lights to effect it, move them to the layer. You can have an object in multiple layers by holding down shift and selecting multiple layers.

3. Go to the Render Layers panel on the right. Click the plus sign, and rename the layer so you can identify it.



Render Layers Continued

4. Under scene, select all of your layers by Shift + Clicking them. This makes them all appear in the viewport. On selected layers get rendered.
5. For each Render Layer, select the appropriate layer (Under Layer) that contains the objects. For example, my character is in the first render layer, so the first render layer is selected, or as shown in the previous picture. The crystal is on layer four, so for the crystal layer I highlighted the fourth layer box.
6. Mask every layer (under Mask Layer) that does not contain your object. This tells the renderer to skip all objects on layers that are not on the current layer it is rendering. For layers with objects that have transparency, like snow for example, do not mask any layers.

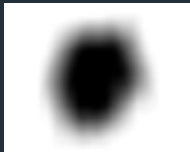


7. Uncheck “Use Environment” for all layers. This disables the background from rendering, considering we have our own background on a layer that we created. Scroll down to passes and check “normal” also. This allows the Normal Node to be used.

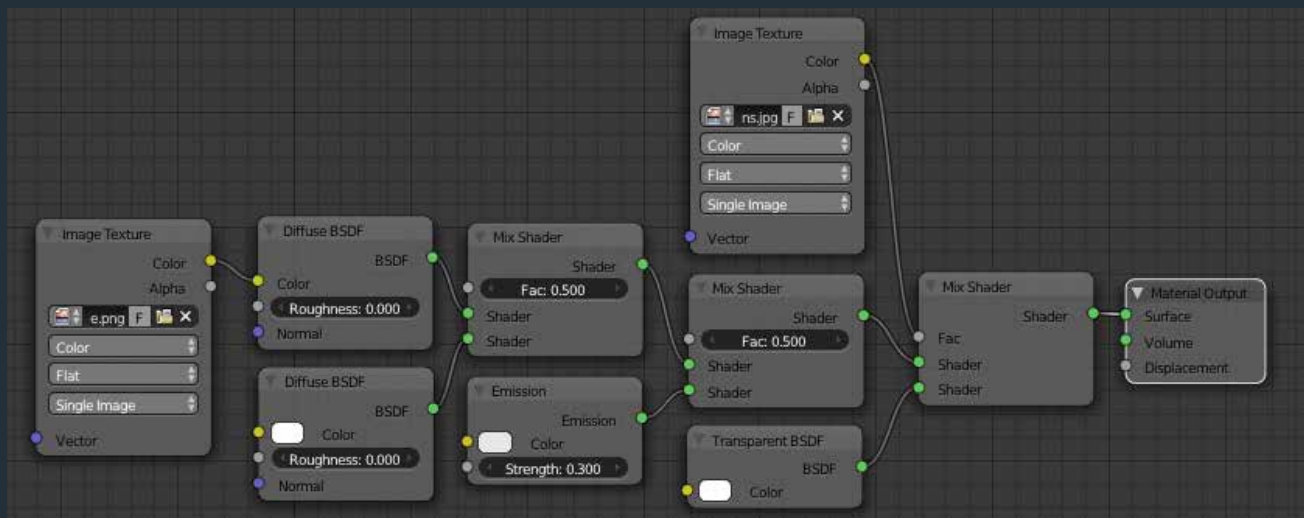
On the left, is the background layer rendered. It is masking out all of the other layers so they appear black. Once all layers are rendered they can be edited separately and put together. As you can see they will all piece together perfectly.

Making it Snow

The snow in the image is merely a bunch single planes placed randomly with a transparent image on them.



The snow texture is basically just a white blob with a transparent background made in photoshop. It was saved as a .PNG file. I used a transparency map to control the transparency of the snow. Anywhere white (left image) will be transparent, black will be shown. When the images are combined, all you will see is the white area of the left texture.

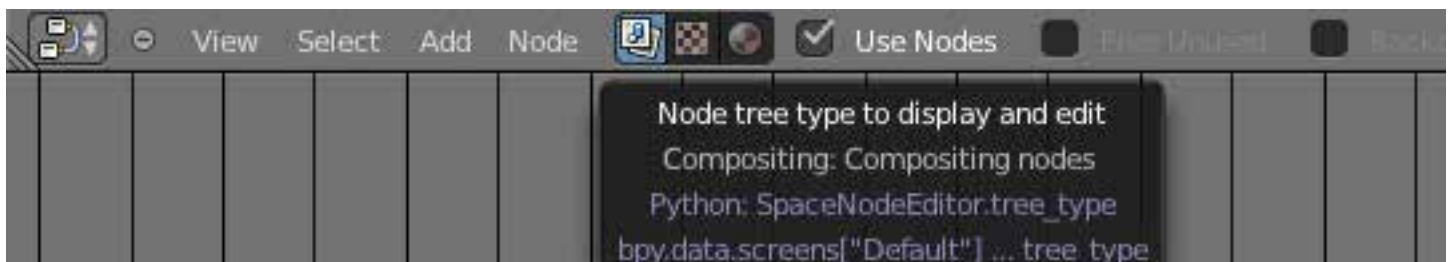


For the node material set up: The image texture (.png) is combined with two diffuse shaders, one set to solid white. That shader is combined with a white emission shader with low strength (eliminating the need to light the snow layer, as the snow will cast light itself.) This is mixed with a transparency node, and the black and white image above is used as the factor. Finally, it is connected to a material output node.

The snow is random planes with the above texture scattered around the scene.

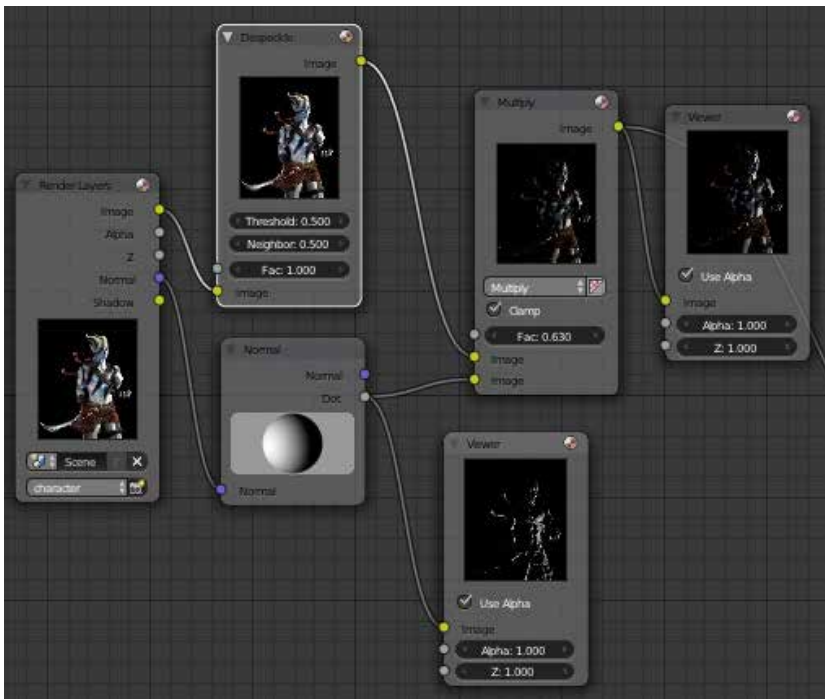
Composite Nodes

Composite Nodes can really add some extra strength to an image. I'm going to explain how to enhance lighting, create blur effects, and enhance color. The first image of the character is the original render, but by using nodes we can drastically change the mood.



First, switch to the node editor. Choose the composite editor, instead of the material editor (the button with the two little squares in it) You'll find that they look very similar. The composite editor is for editing individual layers though, not materials.

Lighting Layers Using Nodes



This simple node setup will drastically change the atmosphere.

1. I added a despeckle node to help clean up some of the speckles from cycles render. This is optional.

2. Attach the Normal spot on the render layer to a Normal node. You can adjust this circle to change the lighting.

3. Combine the original render with the new lighting with a mix shader, set to multiply. I usually adjust the factor value to my liking.

Use viewer nodes to preview.



Blur Effects Using Nodes

Ever notice in photographs where the background seems to kind of overtake a subject around the edges? I use a blur effect to make this happen.



Original Background



Blurred Background

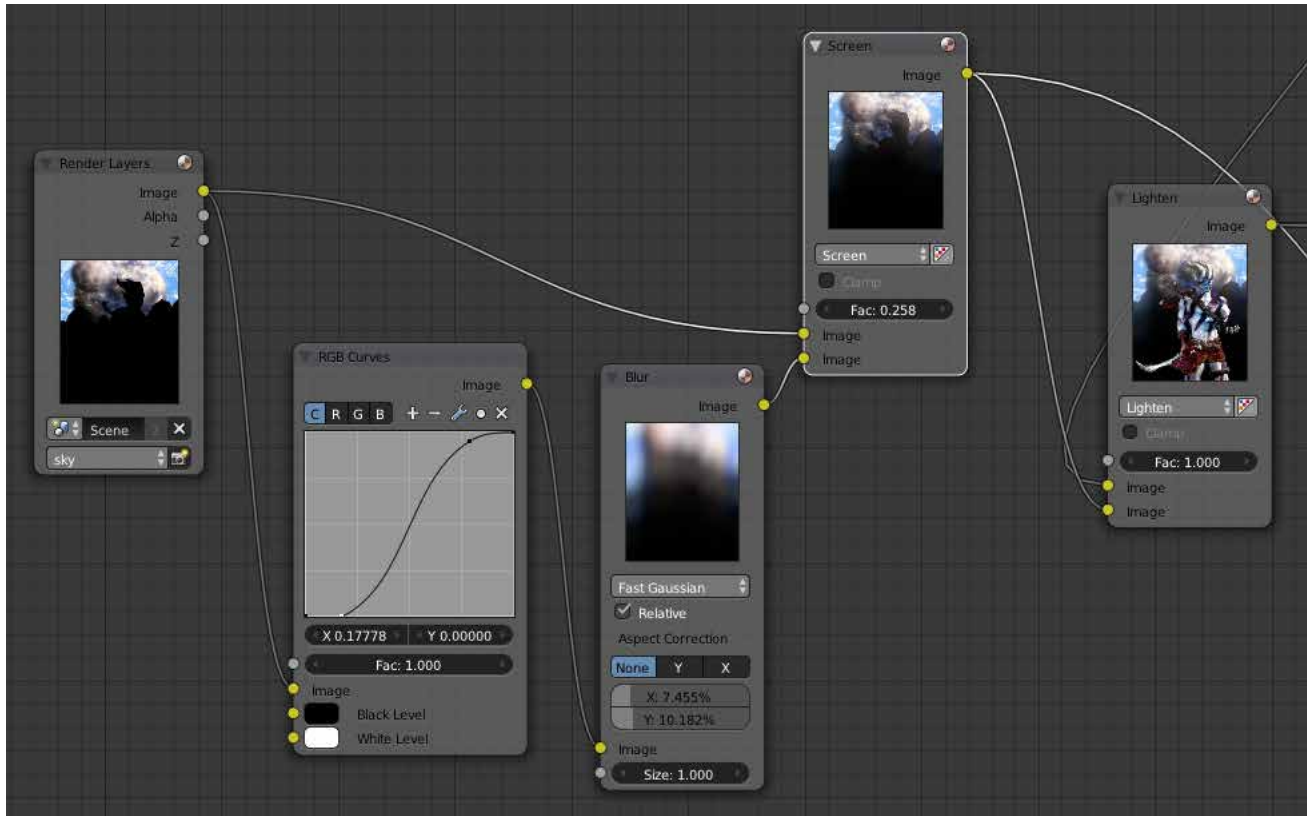


Mixing the blurred background with the original, the color overflows.



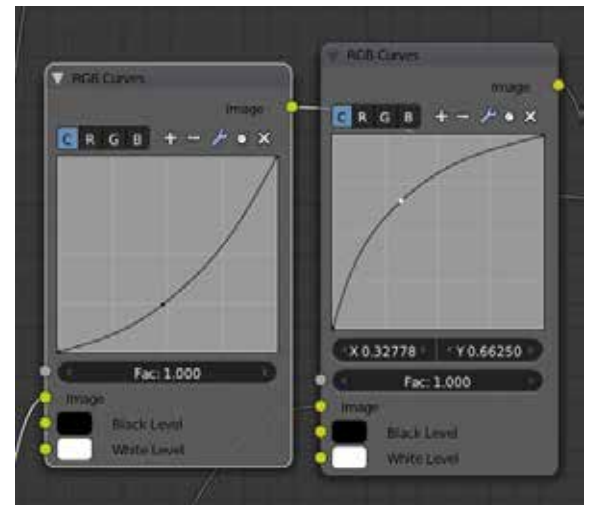
Adding the character in, the color lightly floods over him, giving a stronger sense that he is in the scene.

Blur Effects Continued



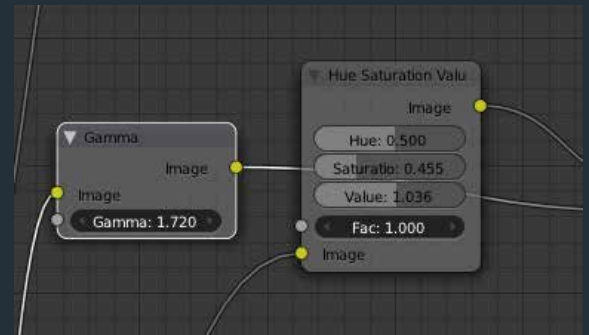
1. Connect the original background layer to an RGB curve. Modify the curve like shown above.
2. Attach a blur node to it, you can really use any settings you like.
3. Add a mix node, set it to screen the original with the blur node, adjusting the factor to your liking.
4. Finally, add the character in by using a mix node. I set it to Lighten, but I encourage you to experiment with other settings.

Enhancing Color



By adjusting an RGB curve you can see how it drastically effects the color of an image. You can also adjust individual red, green and blue channels for different effects. The curves above represent their effects respectively in the image on the left.

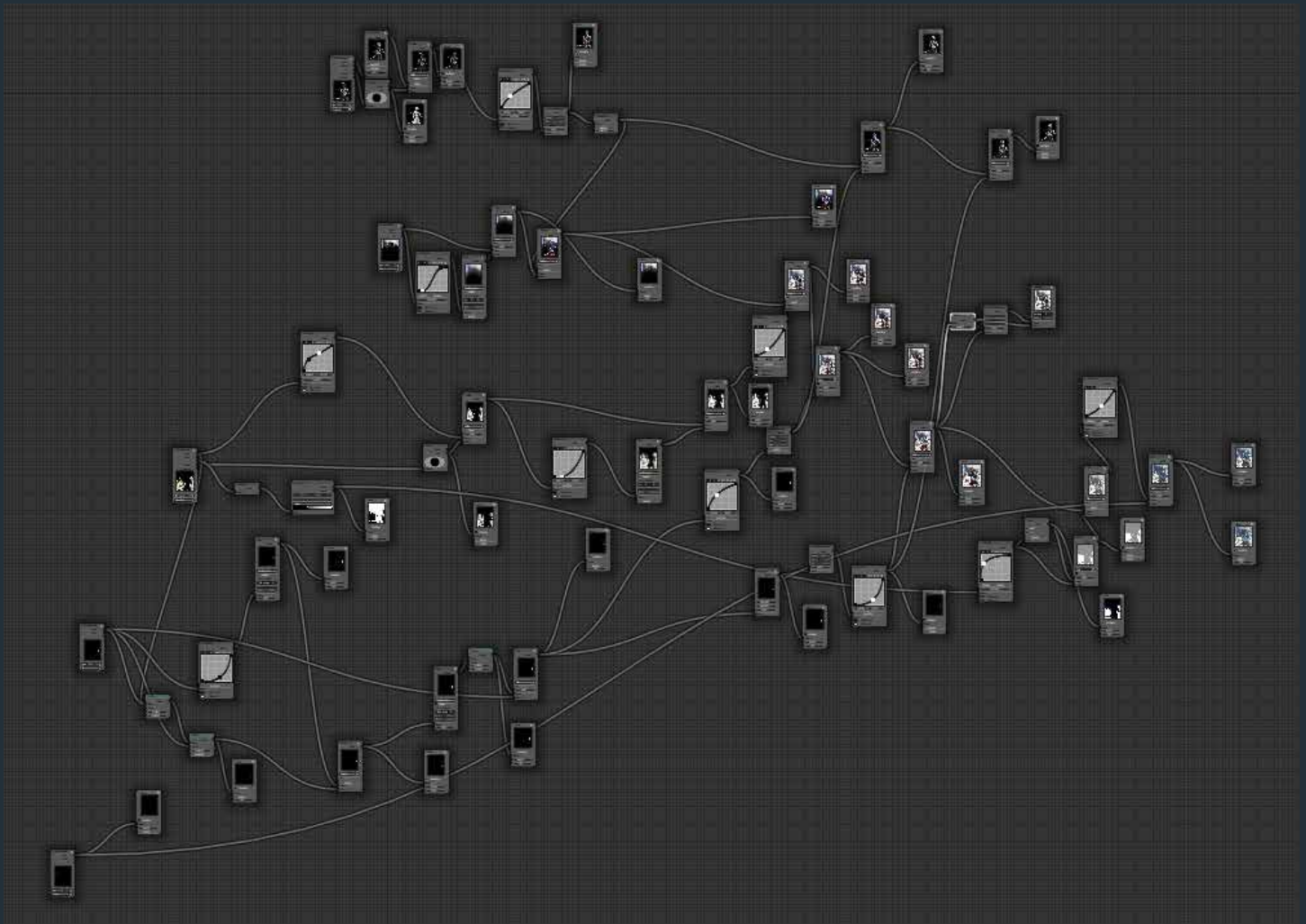
Enhancing Color Continued



There are several other options available to adjust color. You can mix and match and combine nodes as you like. Pictured here is a split view show gamma adjustment on the left, and saturation adjustment on the right.

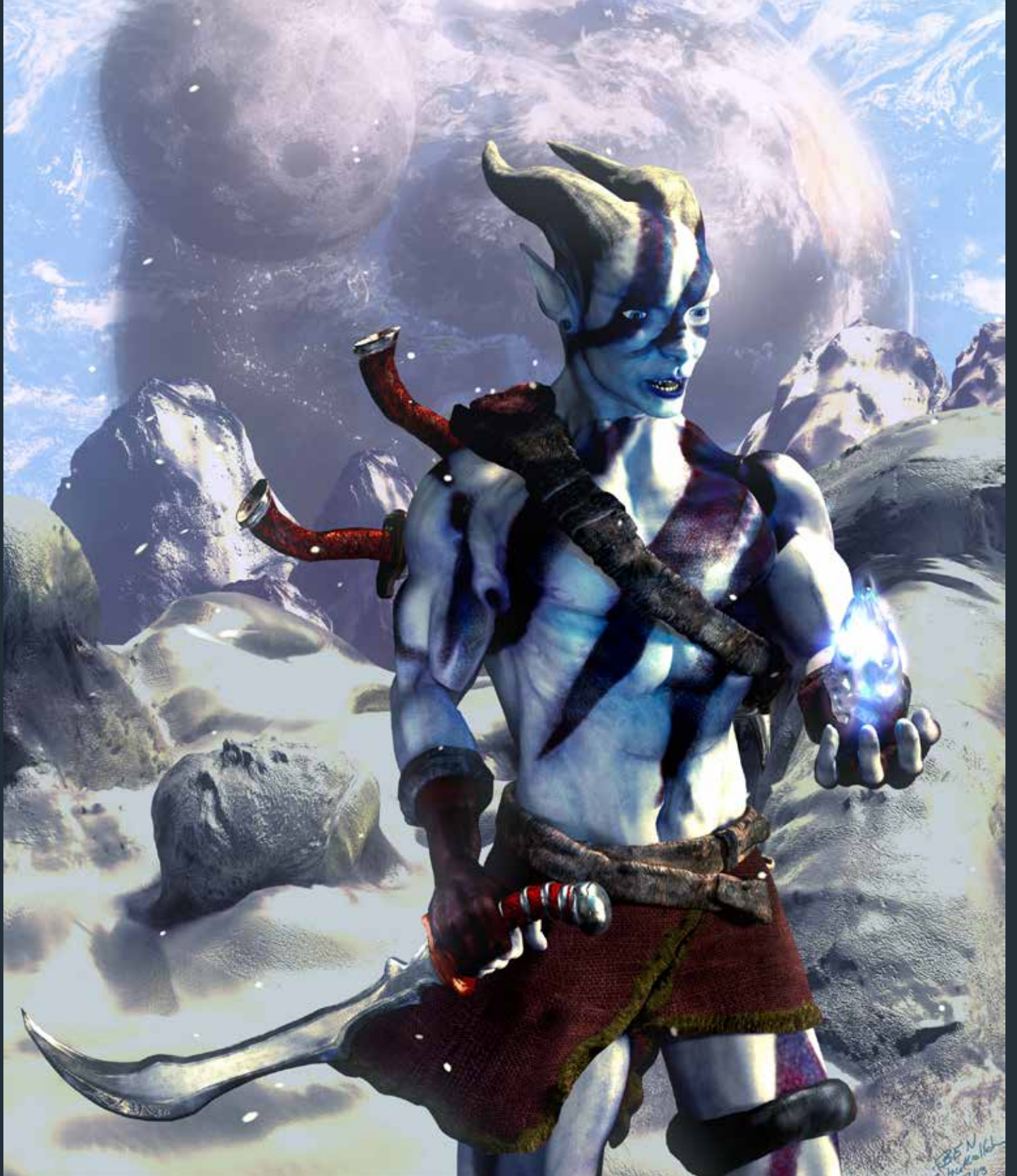
Video Companion

When it comes to art, some things are better off being visual rather than being written about in a guide. If you are having trouble with some of these techniques I have supplied a video to re-irritate the focus of this tutorial. Check it out right here: <https://www.youtube.com/watch?v=mkdnh2sCyWo>





BEN
the artist
2013



Index

B			
Blur	11, 12	R	
		Render Layers	6, 7
C		RGB Curve	13
Color Adjustment (Gamma)	14	RGB curve (blur)	12
Color Adjustment (Saturation)	14	S	
Composite Editor	9	Scene	4
Composite Nodes	9	Sky (Background)	5
		Snow	8
E		T	
Enhancing Color	13, 14	Transparency	8
M			
Mountains	4		
N			
Normal Node	7, 10		