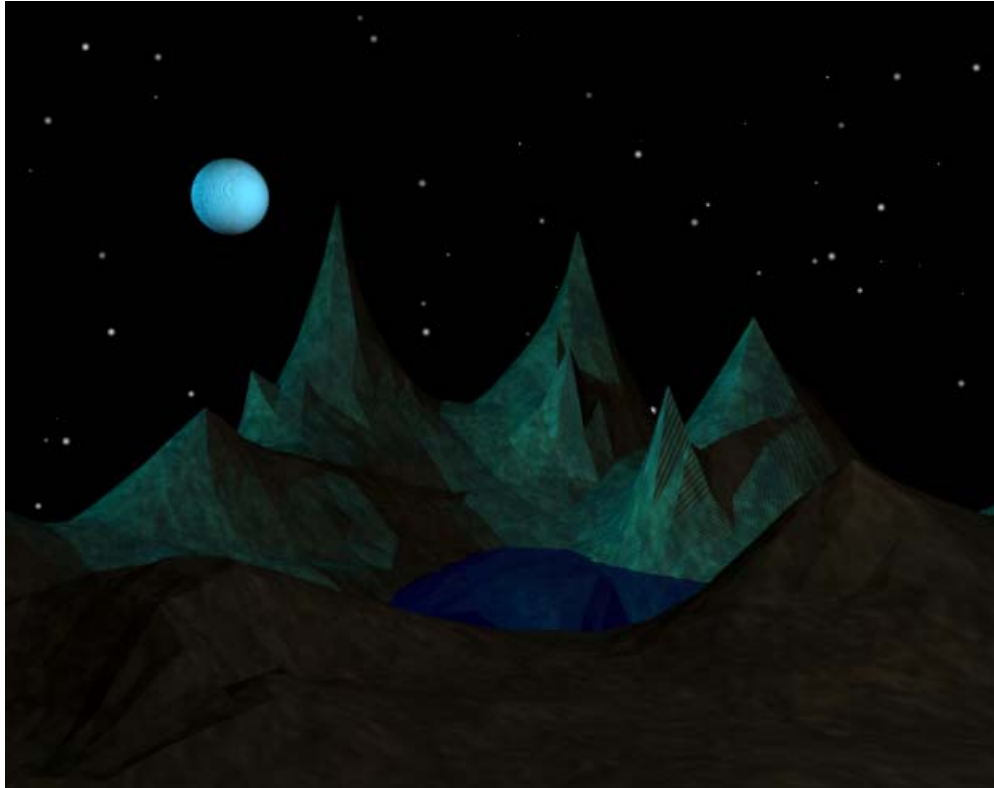


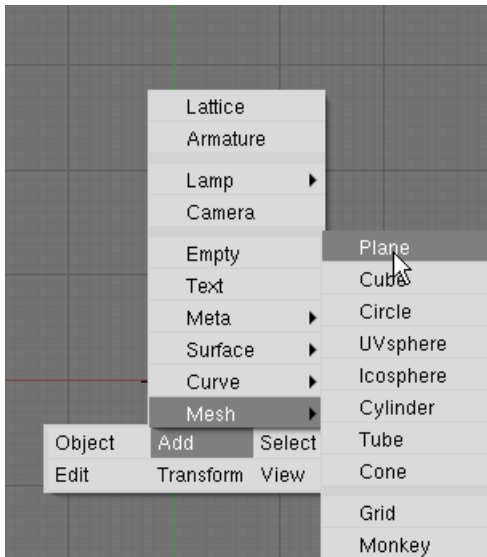
Course: 3D Design  
Title: Proportional Editing - Landform  
Dropbox File: Landform.zip  
Blender: Version 2.45  
Level: Beginning  
Author; Neal Hirsig ([nhirsig@tufts.edu](mailto:nhirsig@tufts.edu))

## Proportional Editing – Landform

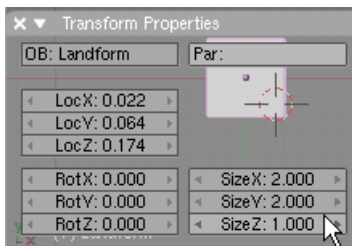


In this tutorial, we'll model a landform object using Blender's Proportional Editing Tools.

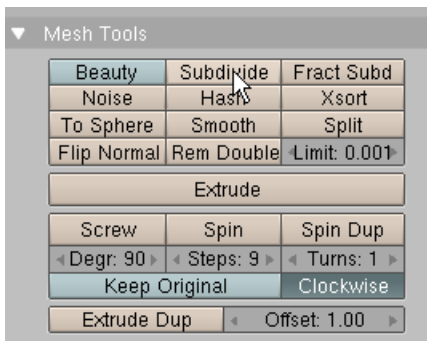
Open MyBlender.blend (or the default if you are using MyBlender as the default Blender file). Select the default cube and delete it. Place your 3D cursor at the center of the viewport. Press Space / Add / Mash / Plane.

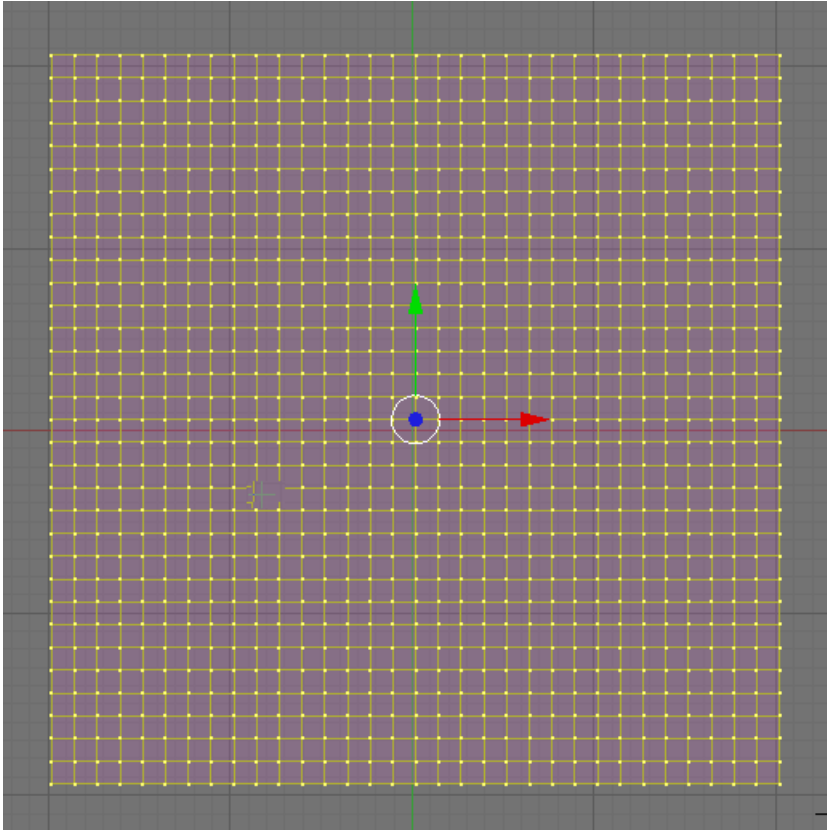


**TAB out of edit mode.** In the Transform Properties Panel name this object Landform and set the SIZE X to 2 and the SIZE Y to 2.

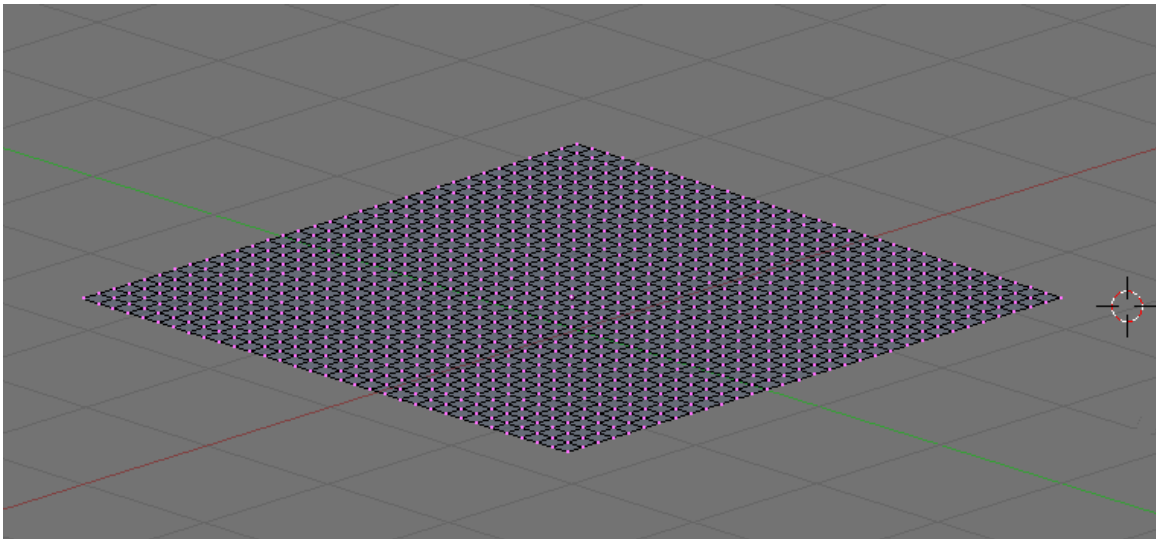


**TAB into Edit Mode.** Select all of the vertices (if not already selected). In the Mesh Tools Panel press the Subdivide button FIVE TIMES.

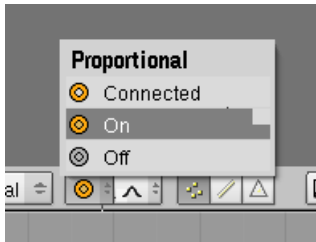




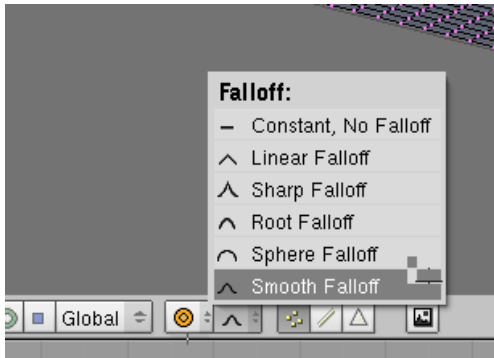
Press the AKEY to deselect the vertices. Rotate your View (MMB Drag) so that you see the Landform object in a more perspective view.



Press the Proportional Edit Falloff icon and set it to ON.



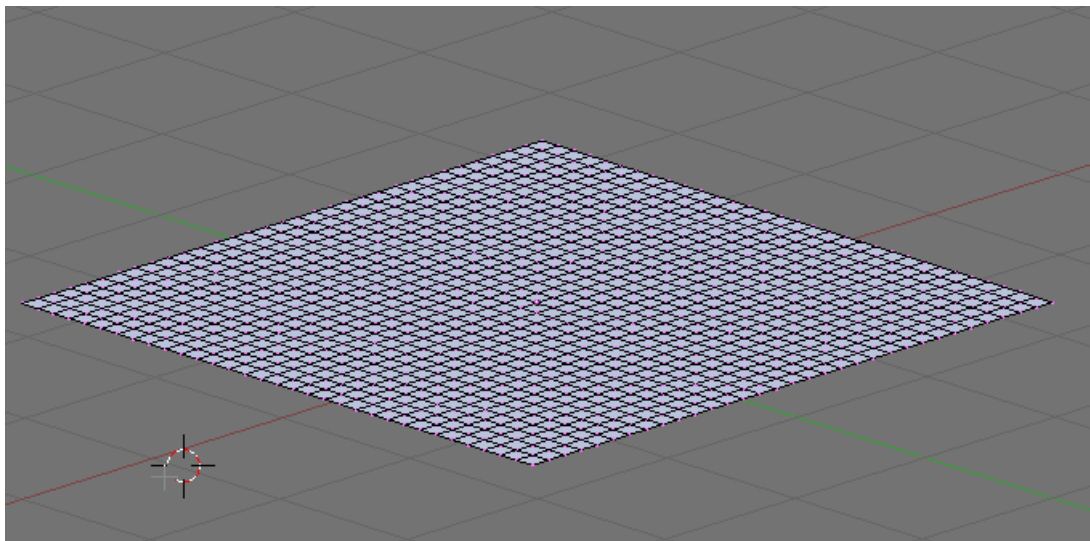
Press the icon to the right of the Proportional Edit icon and select Smooth Falloff



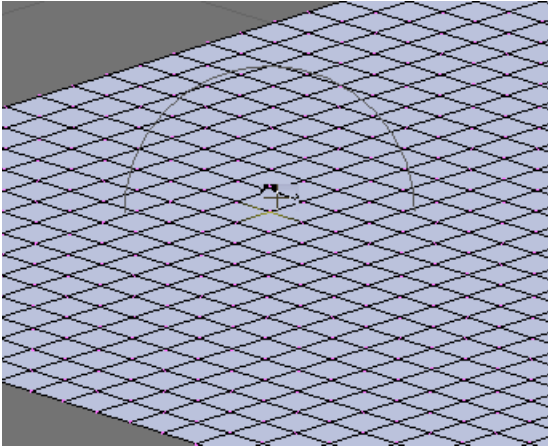
Turn off the Transform Widget.



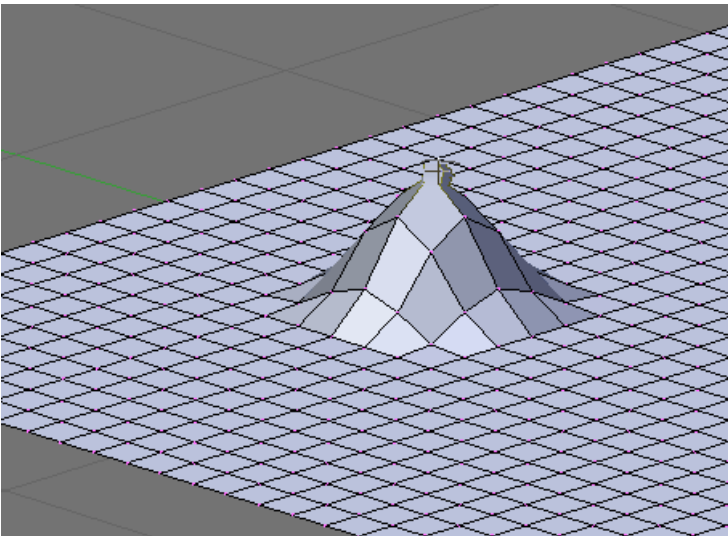
Press the ZKEY to enter Shaded Mode.



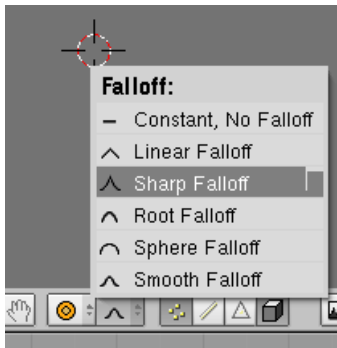
RMB click select any of the Landform's vertices. Press the GKEY (Grab). With the Proportional Editing Tool on you will see a circle surrounding the selected vertex.



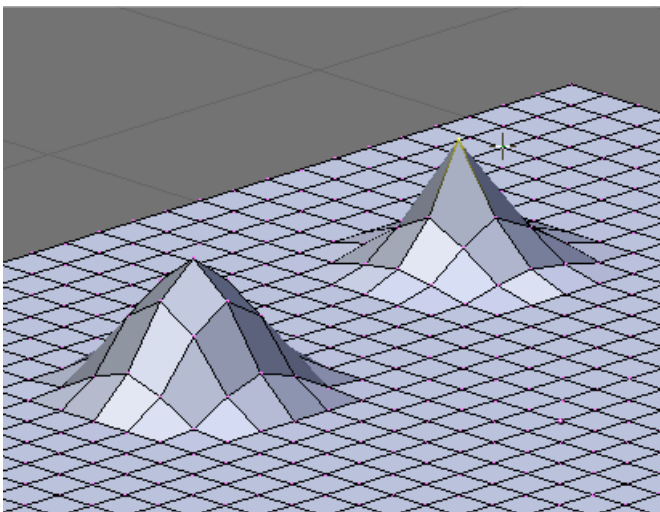
This circle determines the extent of the Smooth Falloff. You can expand or contract this “circle of influence” using your center scroll wheel on your mouse. Size the circle to the extent you want then drag it upwards a bit. LMB click to set.



This result is based on the selection of a Smooth Falloff. Press the Falloff icon and choose Sharp Falloff.



Select a vertex on the Landform object. Press the GKEY. Adjust the size of the circle of influence. Move the vertices upwards a bit and LMB click to set.

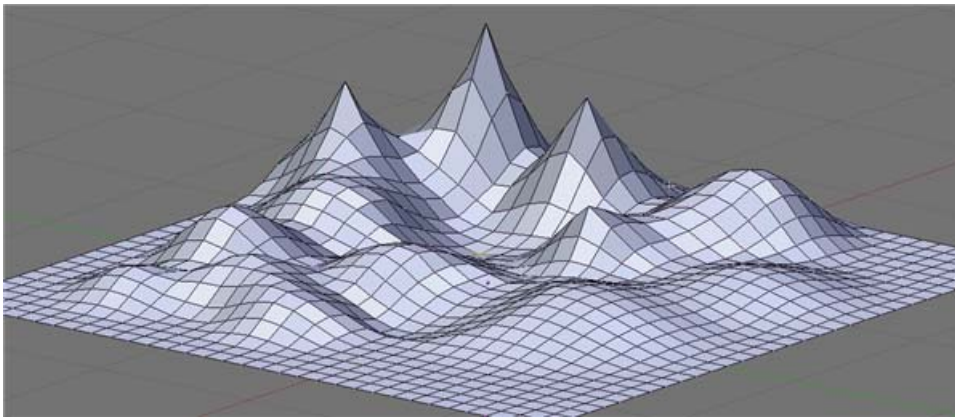
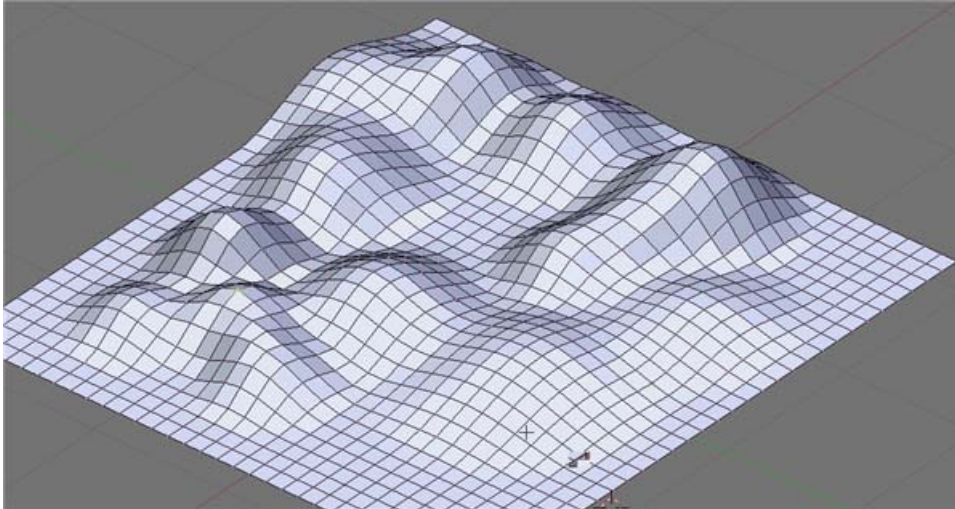


Notice the falloff is much sharper with this setting. Using the various falloff settings develop a landform model. You can re-select vertices already moved and you can move vertices up or down or tilted to the side.

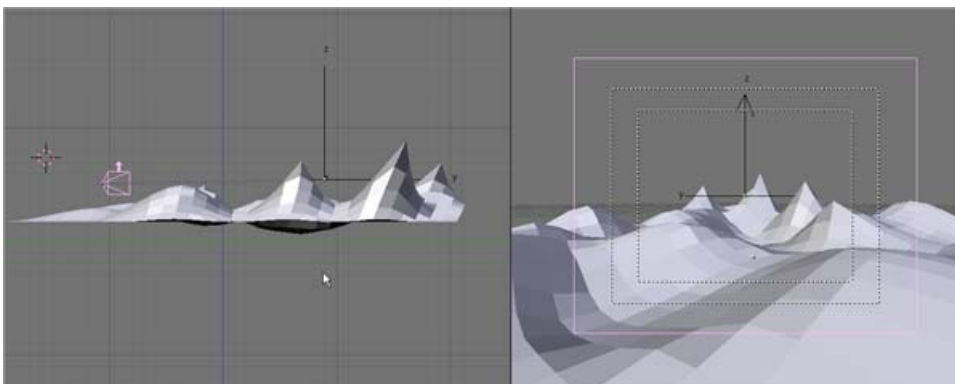
It is a good idea to begin making rolling hills and later make them more complex with peaks and valleys. The following images are of various stages of my modeling.

**MAKE SURE YOU CONTINUALLY ROTATE YOUR VIEW (EVEN UPSIDE-DOWN) TO SEE THE MODELING EFFECT AND SELECT VERTICES.**

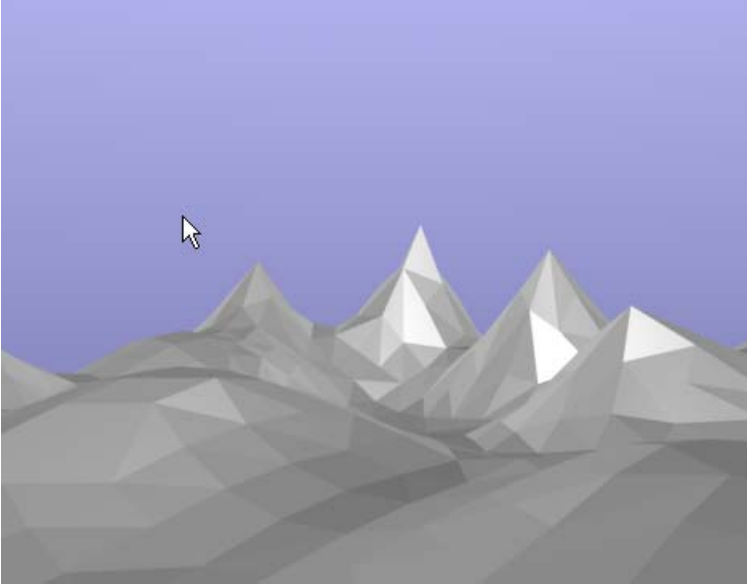
Note: Since we are in edit mode you can press the UKEY to repeatedly undo your actions.



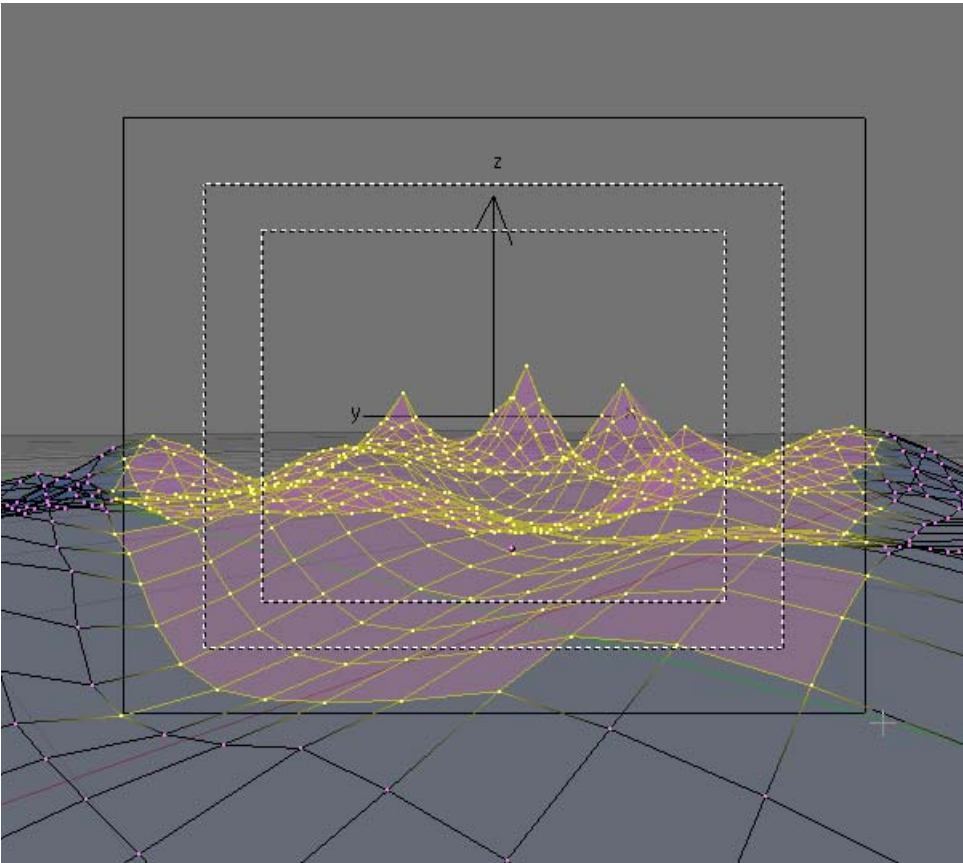
At this point it is a good idea to bring in the camera and some lighting to the scene to get a good perspective of the final composition. Add Layer 10 (Camera and Camera Focus) and Layer 20 (Lighting Set-up). Split your 3D viewport with the working rotated view on the left and the Camera view on the right. Grab and move the camera focus and the camera and adjust their position to frame the desired viewpoint for the final rendering.



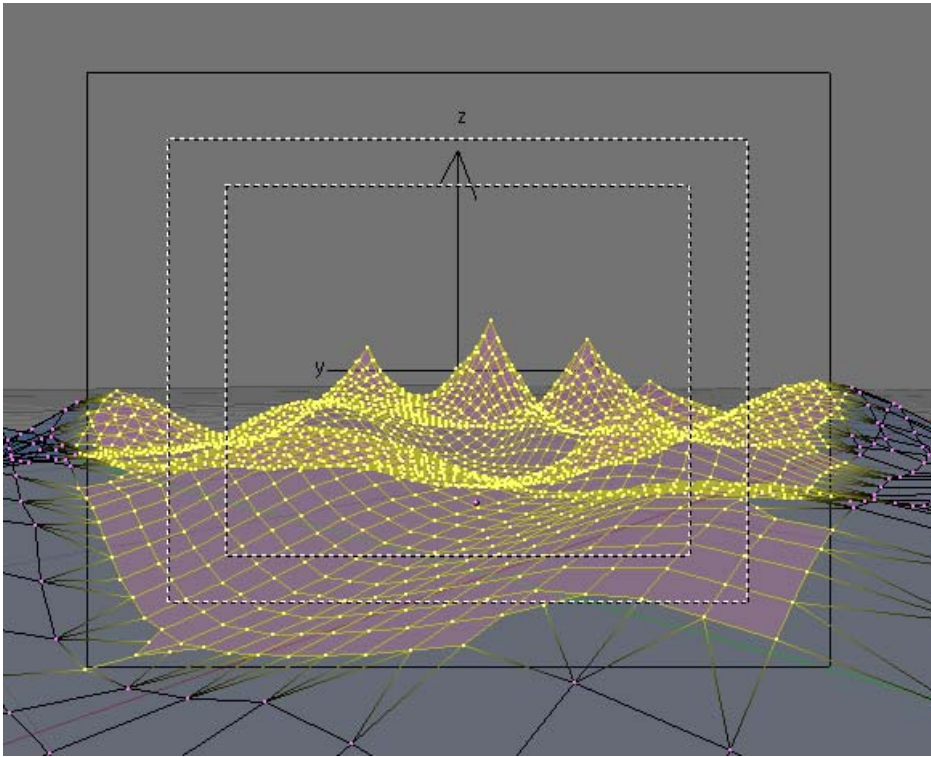
Render F12:



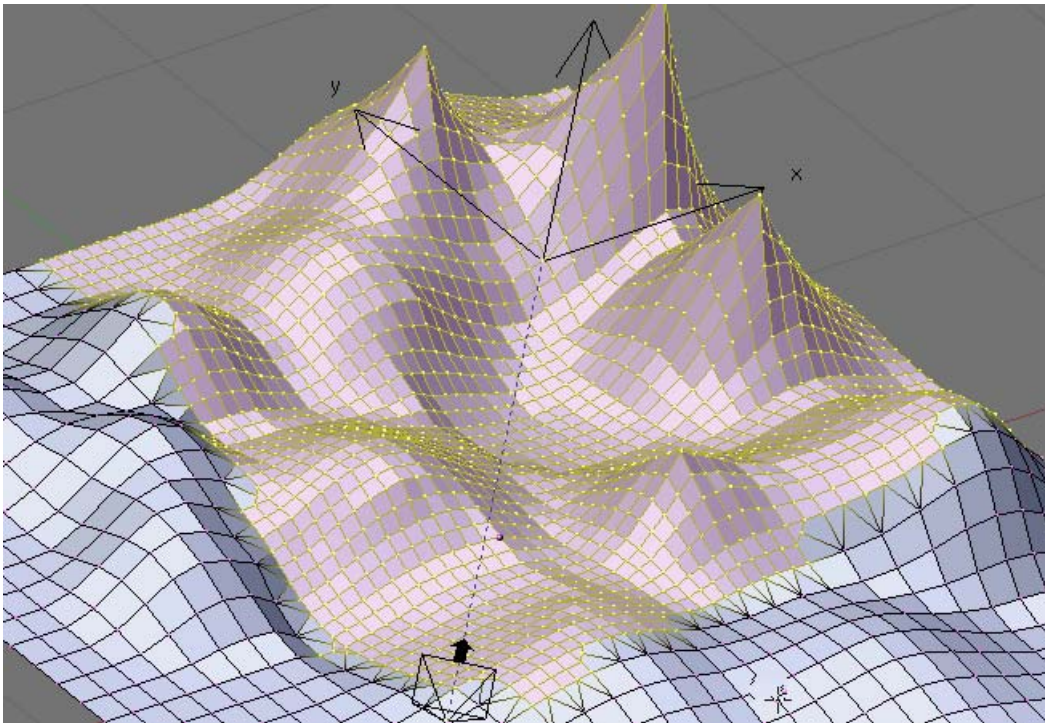
In the Camera viewport press the ZKEY to enter wireframe mode (Make sure the Landform object is selected and in Edit Mode). Press the BKEY (Box Select) and drag a box around the vertices that are in the Camera View selecting them.



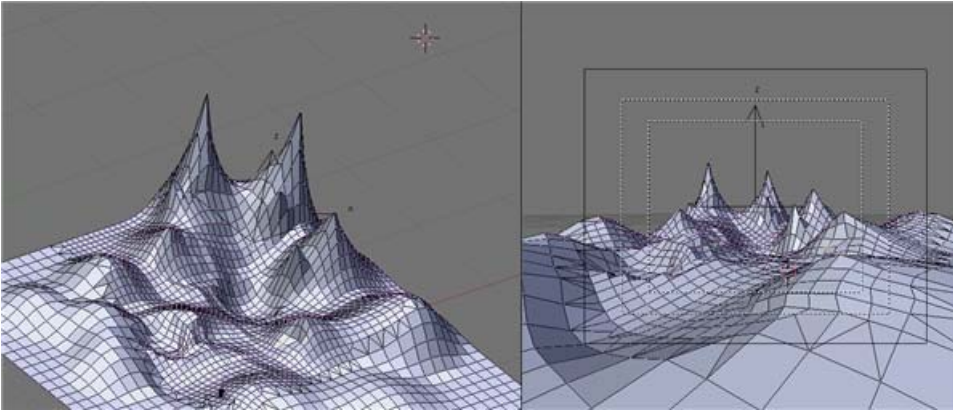
Press the Subdivide button ONCE.



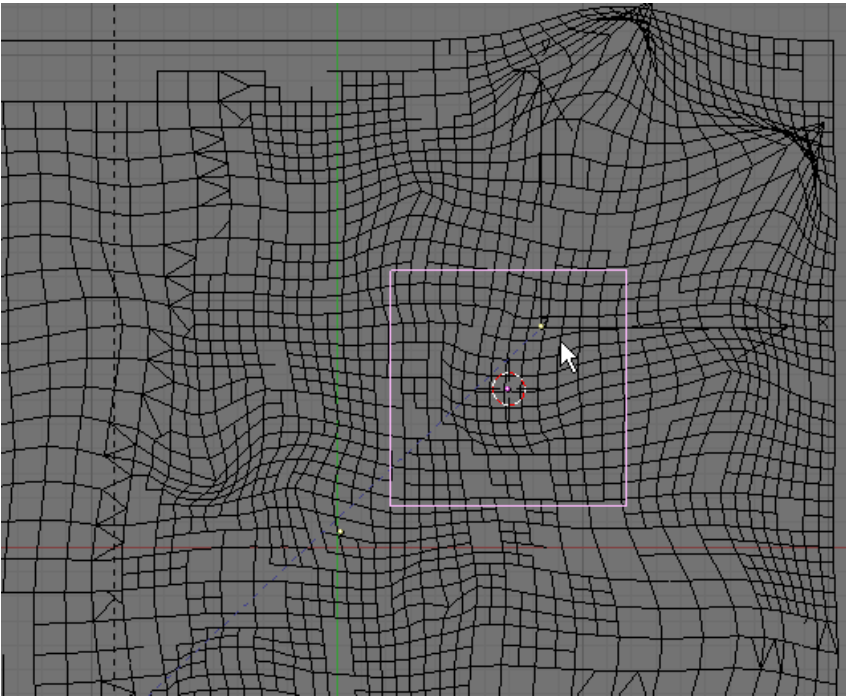
This subdivides the faces in this area allowing for further detail modeling.



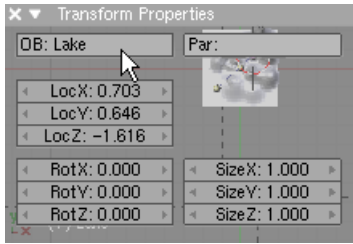
Continue modeling the working viewport until you create the desired compositional image in camera view.



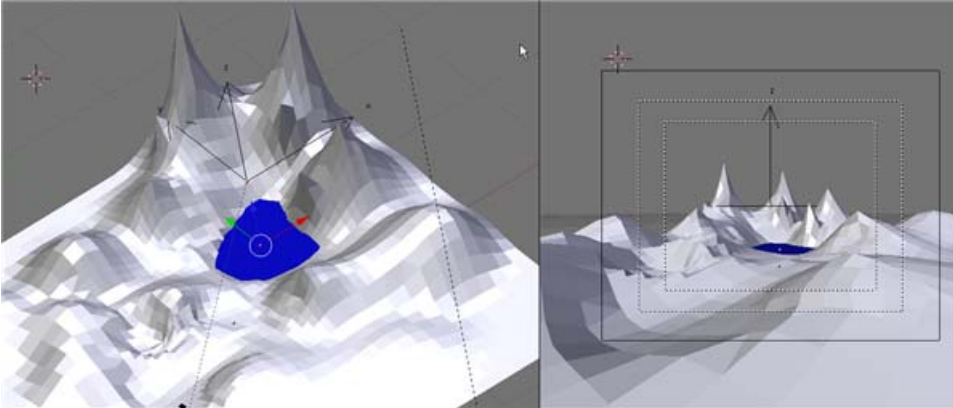
I created a depression in the valley in front of the peaks in the background. To add a lake to this area switch to top view. TAB out of Edit Mode. Press Space / Add / Mesh / Plane. Size and place the plane object over the depression.



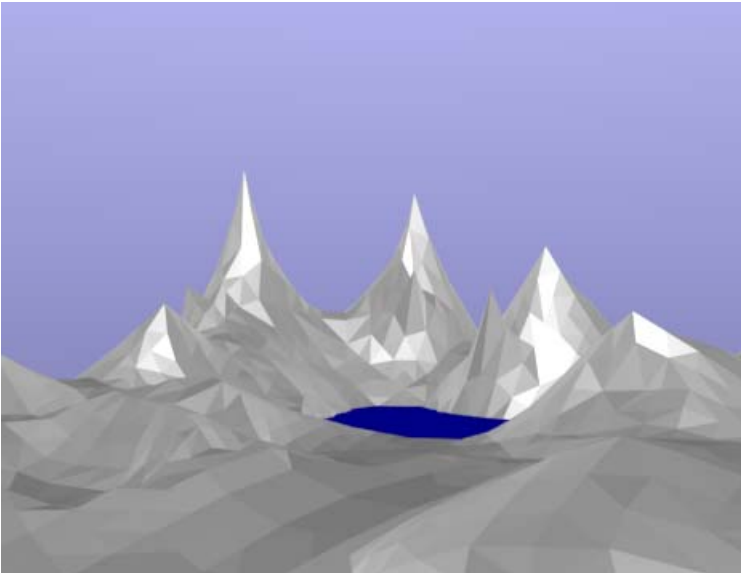
Add a Blue material to this object (to distinguish it from the landform object) and name it Lake.



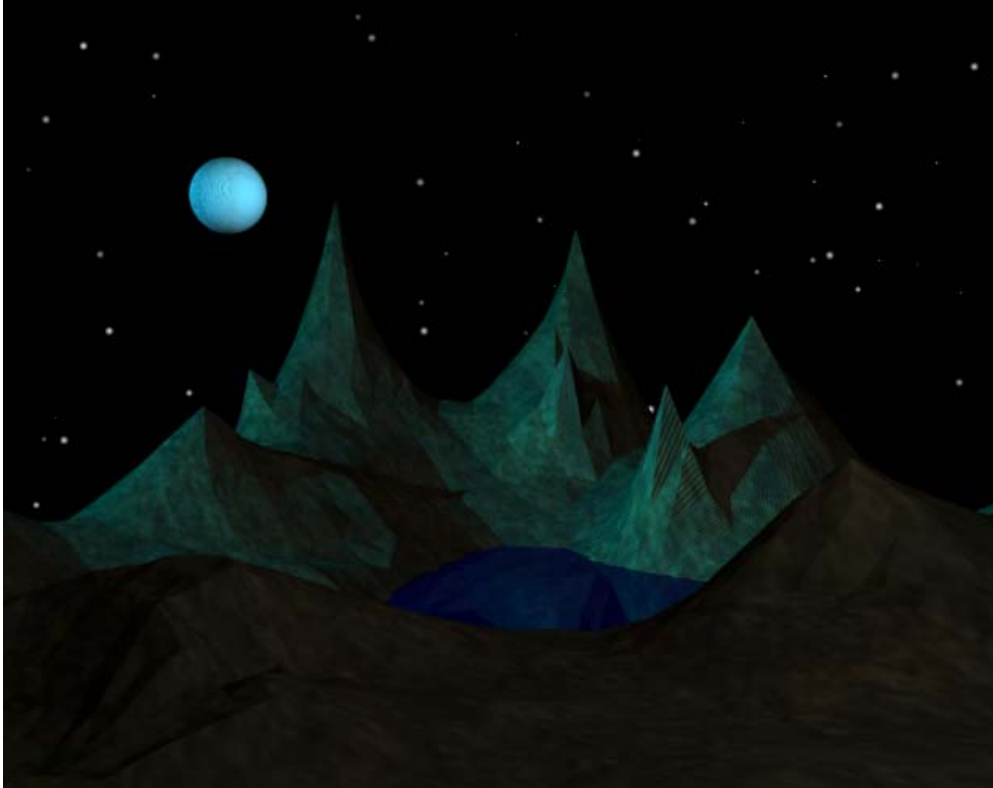
Switch to front view and position the Lake object.



Render F12.



Your model will probably be different than my example. The following is an explanation of the details, materials, background and lighting of the example model:

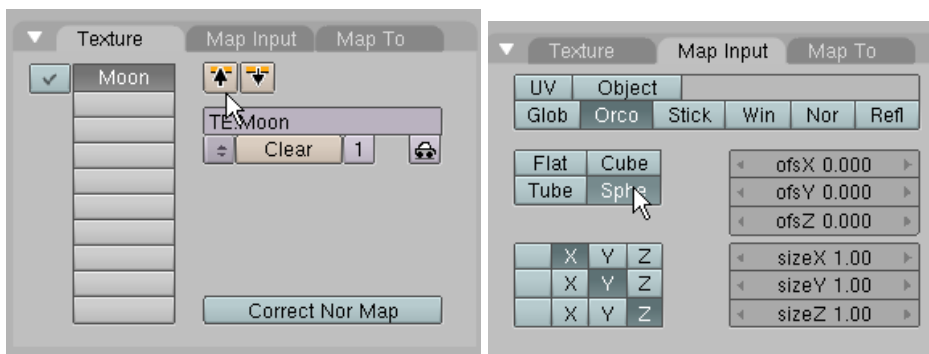


#### Modeling:

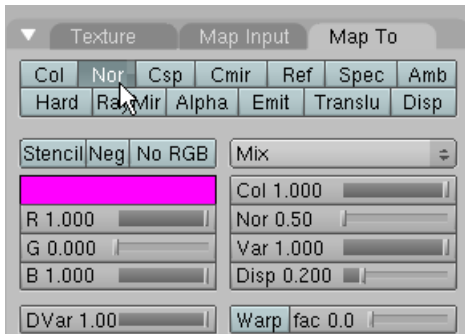
I added a smoothed sphere and scaled and placed it in the scene to represent a moon.

#### Materials:

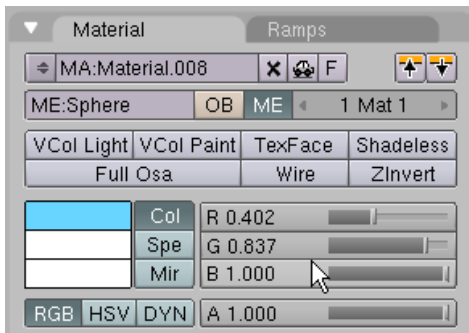
Moon Object: – The moon has an image texture applied to it. (Moon.jpg) with the MAP INPUT set to Sphere. (This image file is located in the Landform.zip file.)



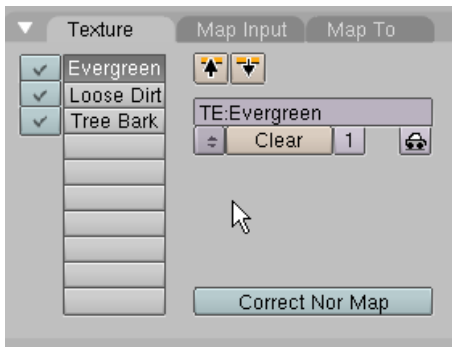
The Moon texture map is applied to the NOR (Normals) channel in the MAP To Panel.



The COL (Color) channel settings are a Blue-Green color.



Landform Object: - There are 3 texture maps applied to the landform object. (Evergreen.jpg, Loosedrt.jpg and TreeBark.jpg) with the MAP INPUT mapping set to the default FLAT.



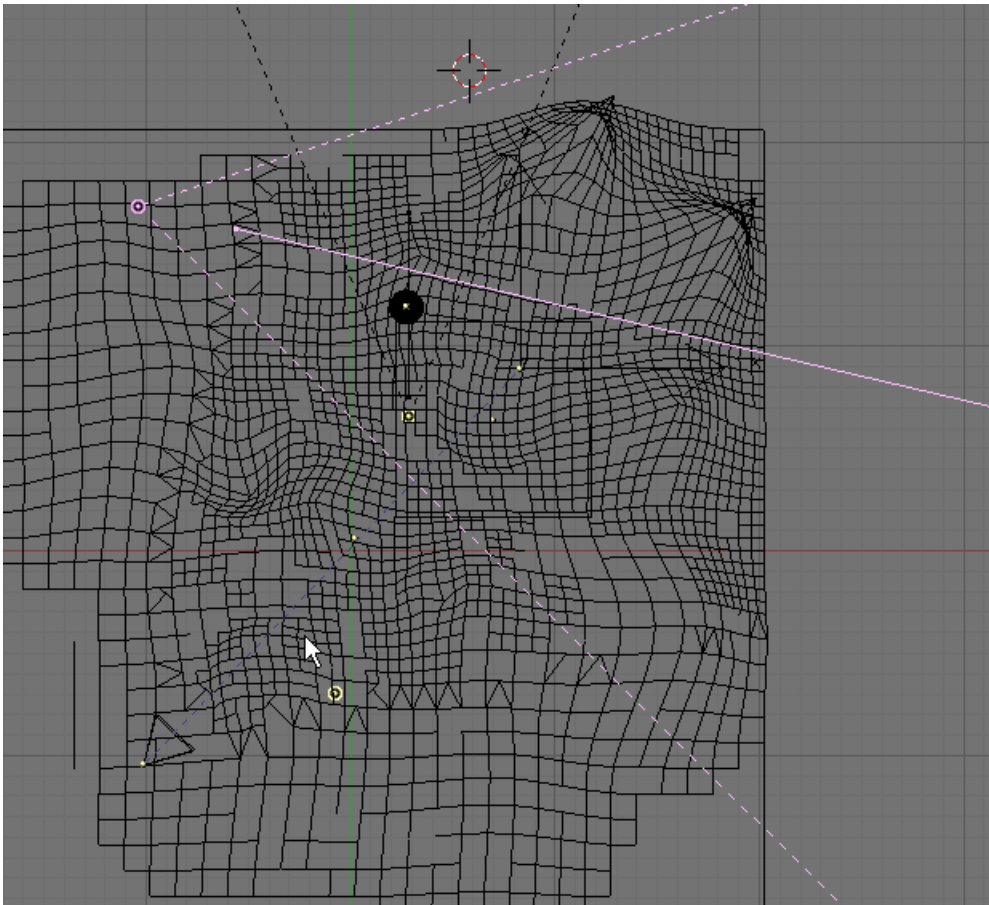
In the MAP TO panel, the 3 textures are applied to the COL (Color) Channel and the Color Mix is set to .333 on **each** of them.



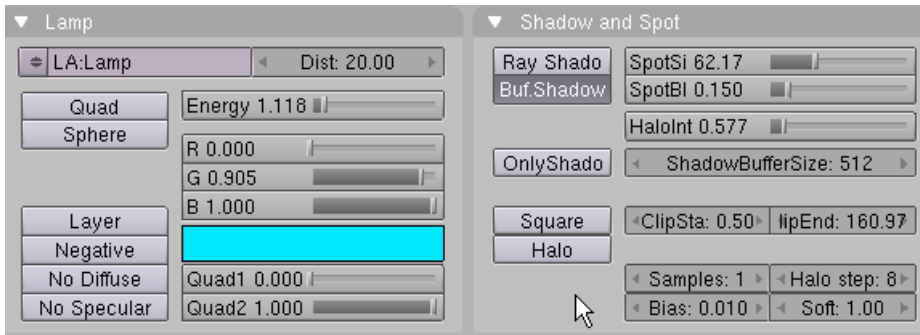
This means the three images are mixed together in equal proportions to create one texture image.

Lighting:

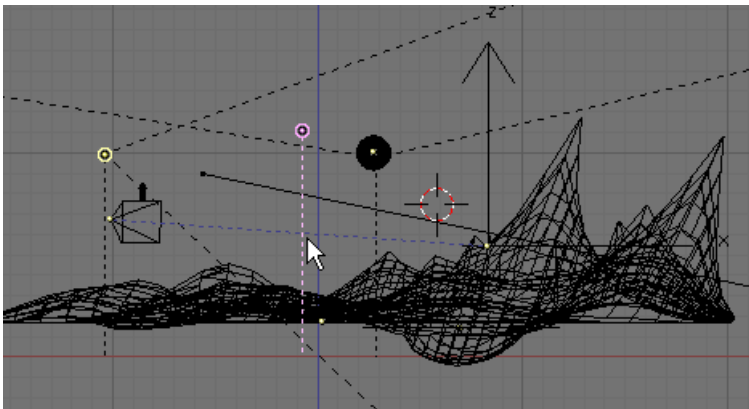
Layer 20 is turned off so that none of the lighting set-up located there affects the scene. A spot lamp was added to the scene with the focus striking the mountain and lake area from the left side.



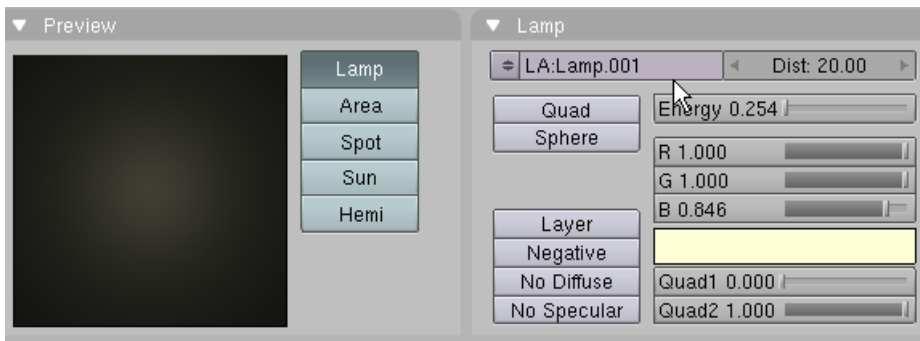
The color of the spot is set to a blue-green and the Energy is raised a bit. The Spot Size is also increased to cover the mountain and lake areas.



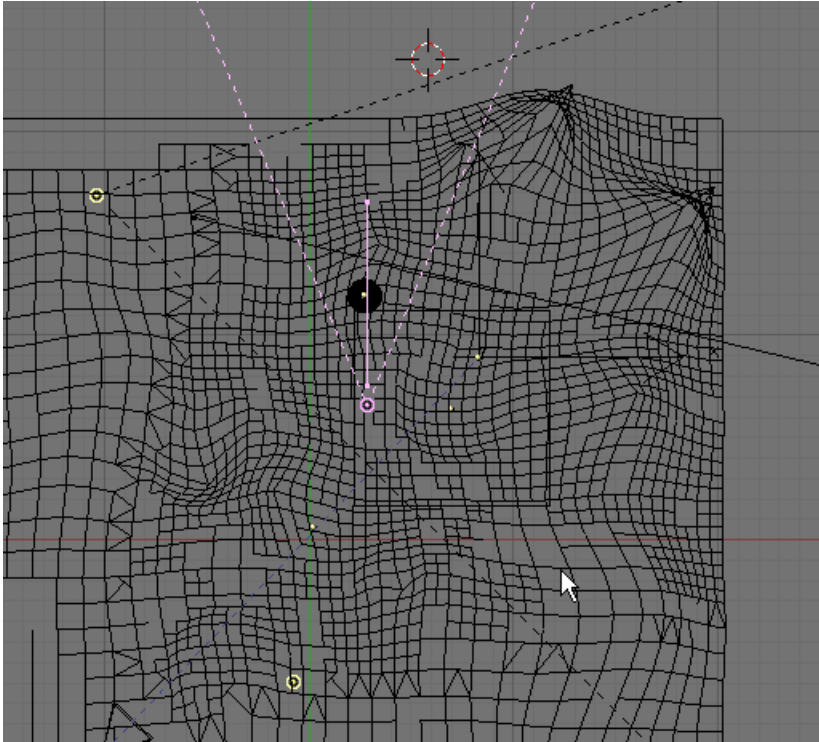
A second Lamp type lamp is added to the scene to provide some very low general illumination to the foreground.



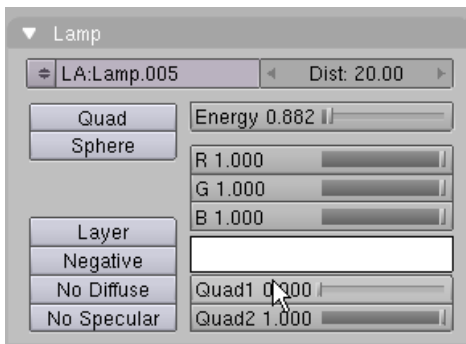
The color is a warm white and the energy is set very low.



A third Spot Type lamp is added to the scene and is focused on the moon object only.

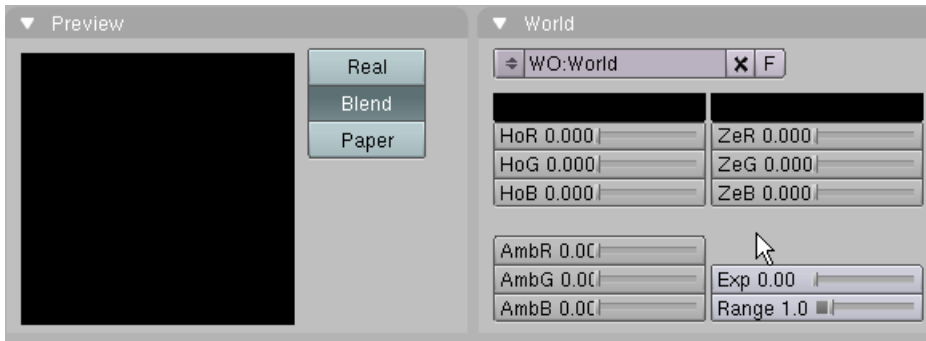


The color is white and the energy is reduced. This light does not light any object other than the moon.



Background:

In the World Panel Buttons the Horizon and Zenith sliders are set to Black and the Type to Blend. This creates a black background.

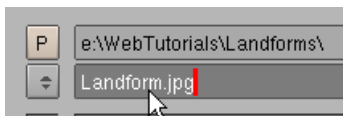


In the Mist/Stars Panel the Stars are activated with moderate distribution settings.



Rendering:

Press F10 (Scene). Render F12. You can save your rendering as an image file by pressing F3. Select the directory you want the image saved and name the file (you must add the .jpg file extension). Press Save JPEG when finished.



A finished copy of this tutorial file named LandformComplete.blend is located in the Landform.zip file.