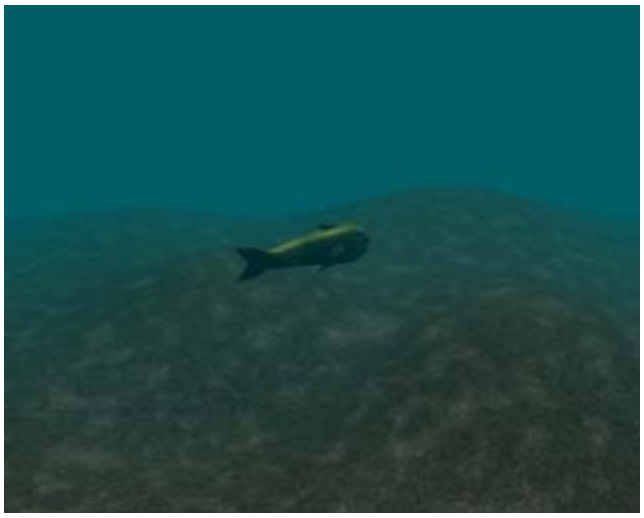
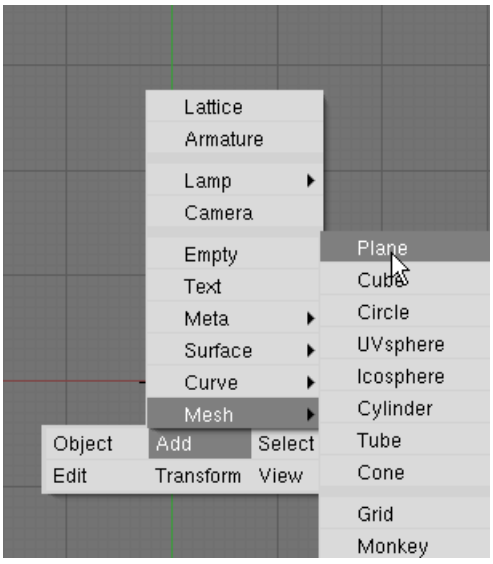
Course: 3D Design
Title: Modeling: Underwater Scene
Dropbox File: Underwater.zip
Blender: Version 2.41
Level: Beginning
Author: Neal Hirsig (nhirsig@tufts.edu)

Modeling – Underwater Scene



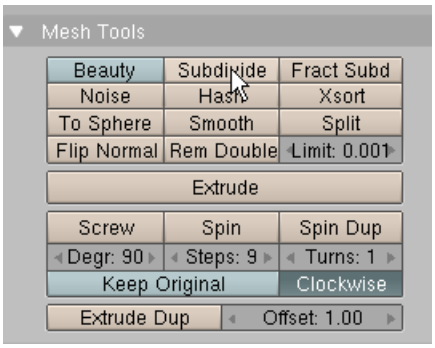
In this tutorial, we'll model an underwater scene using Blender's Proportional Editing Tools, Mist Textured Lighting and Volumetric Light Tools.

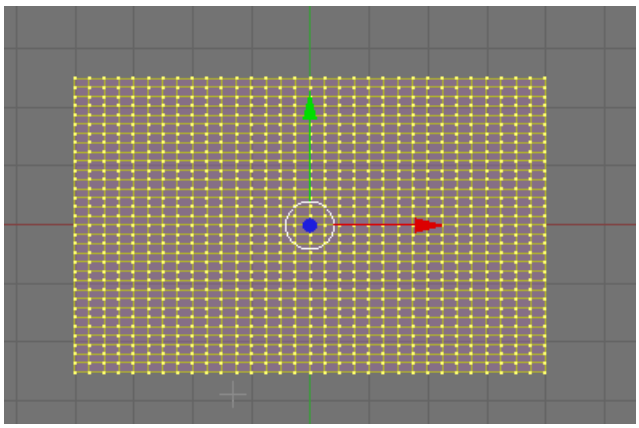
Open MyBlender.blend (or the default if you are using MyBlender as the default Blender file). Select the default cube and delete it. Place your 3D cursor at the center of the viewport. Press Space / Add / Mash / Plane.



TAB out of edit mode. In the Transform Properties Panel name this object Sea Floor and set the SIZE X to 4 and the SIZE Y to 2.5. Also set the LOC X, Y, and Z at 0

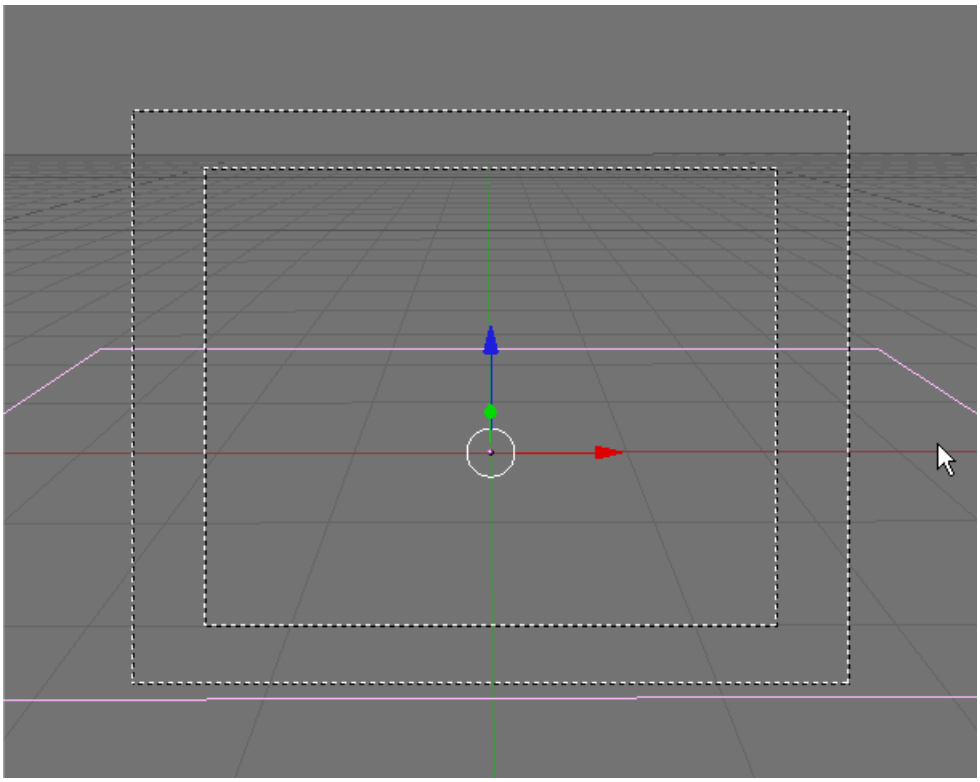
TAB into Edit Mode. Select all of the vertices (if not already selected). In the Mesh Tools Panel press the Subdivide button FIVE TIMES.



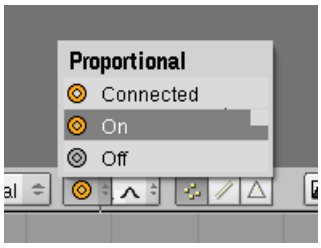


Press the AKEY to deselect the vertices. Split your 3D viewport with the Camera View on the left and the Top View on the right.

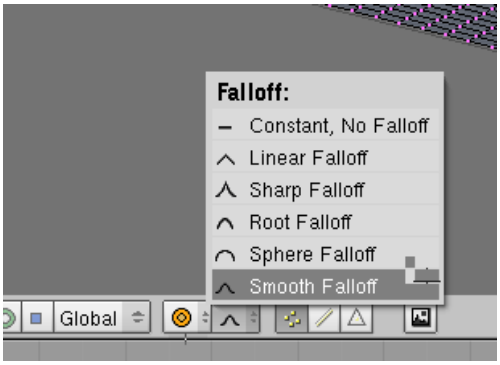
TAB out of Edit Mode. Add Layer 10 (Camera and Camera Focus) to the scene. Use the top and side views to position your camera and camera focus so that the Camera View looks like the image below.



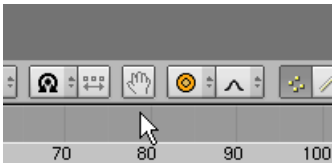
Turn off layer 10 (camera). We want to create a subtle undulating sea floor. With the Sea Floor object selected TAB into Edit Mode. Press the Proportional Edit Falloff icon and set it to ON.



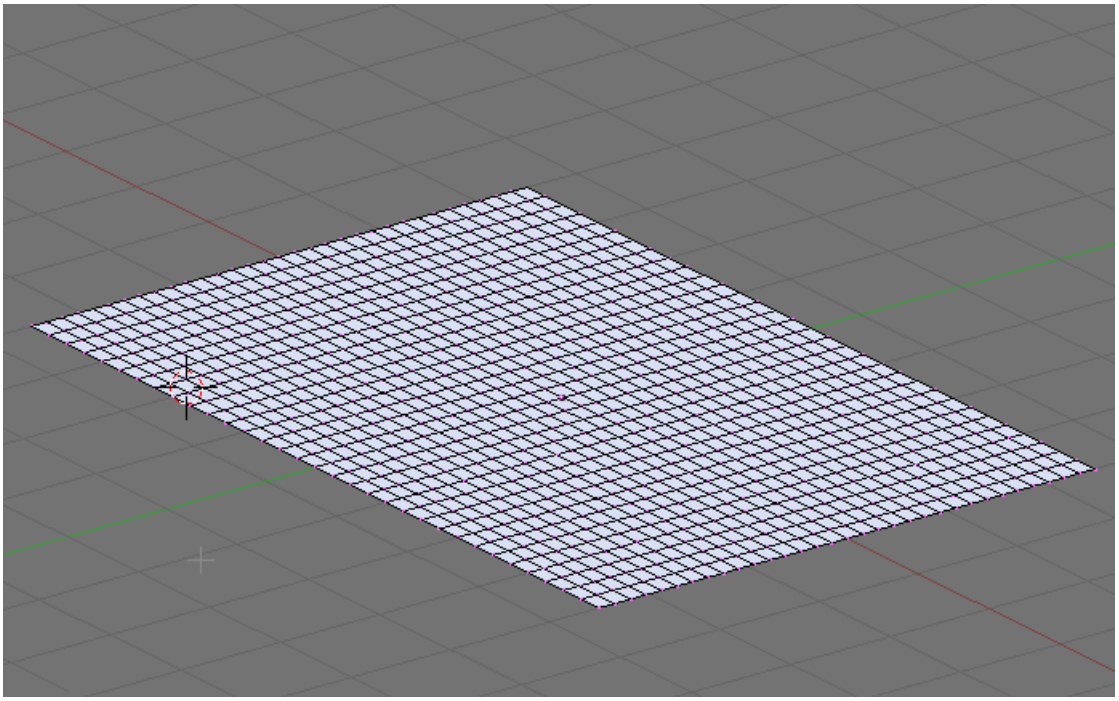
Press the icon to the right of the Proportional Edit icon and select Smooth Falloff



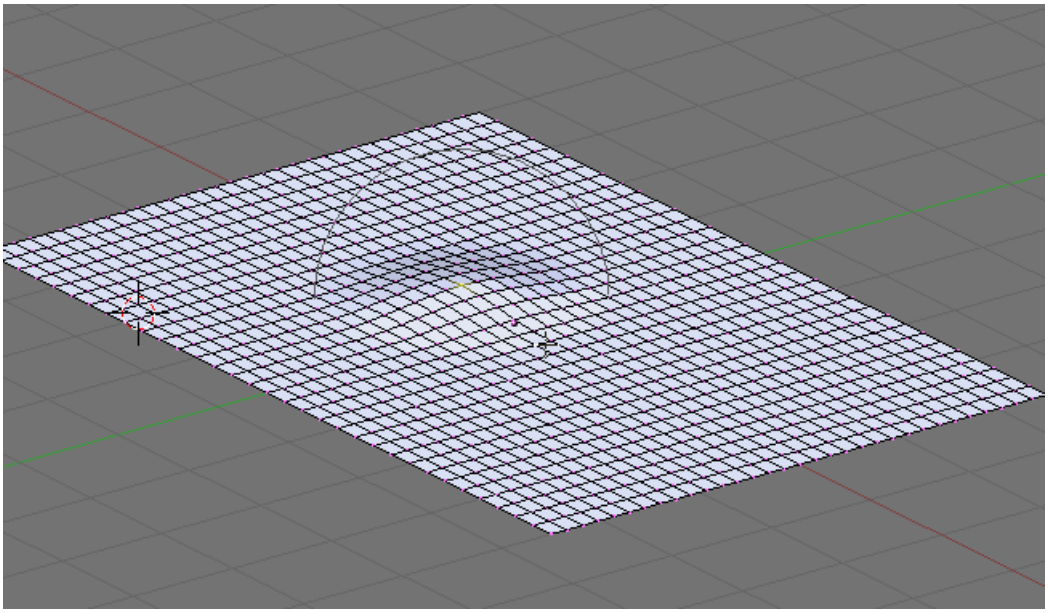
Turn off the Transform Widget.



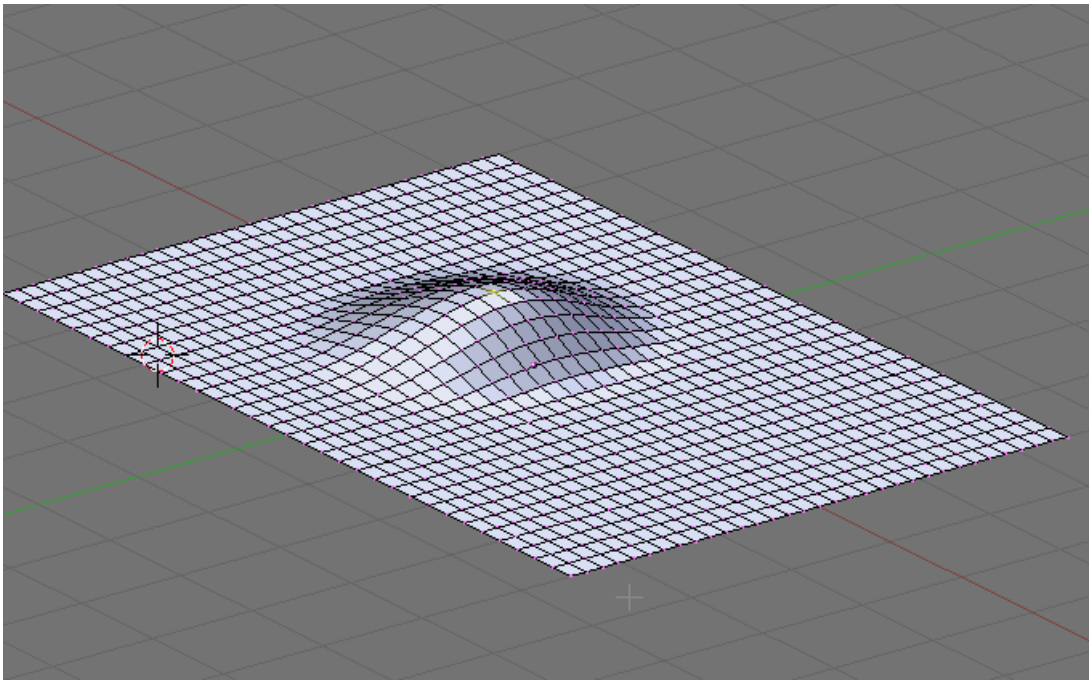
Press the ZKEY to enter Shaded Mode. Rotate your Top view so you can see the Sea Floor object in some perspective.



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

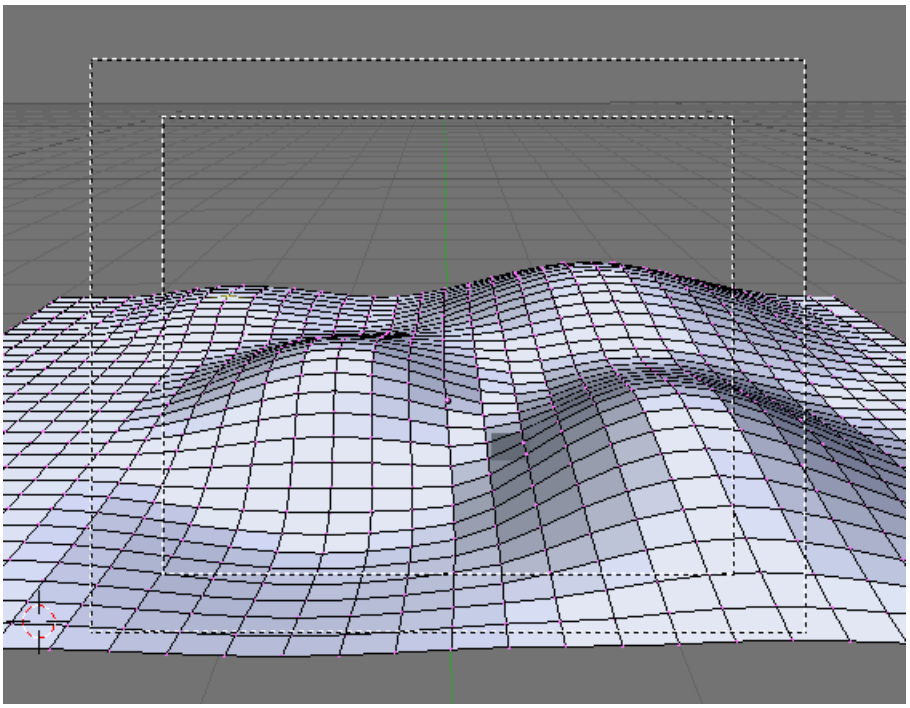


This circle determines the extent of the Smooth Falloff. You can expand or contract this “circle of influence” using your center scroll wheel on your mouse. Size the circle rather large then drag it upwards a slight bit. LMB click to set.

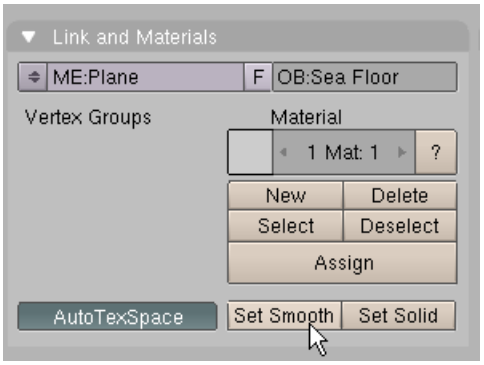


This result is based on the selection of a Smooth Falloff. Using the Proportional Falloff tool model the Sea Floor object to look something like below.

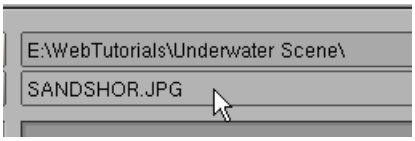
CAMERA VIEW:



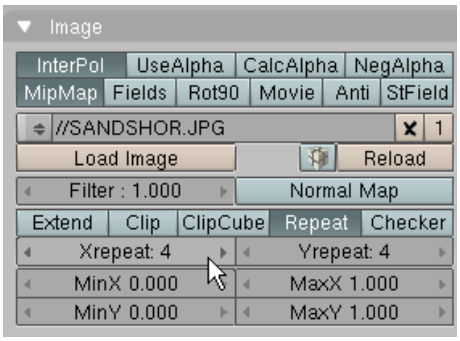
In the Link and Materials Panel press the Set Smooth button.



Press F5 (Materials). In the Materials Panel press the Add New Button. In the Texture Panel press the Add New button. Press F6 (Textures). In the Texture Type dropdown box choose Image. Press the Load Image button. Select the Sandshor.jpg image file. This file is located in the Underwater.zip file.

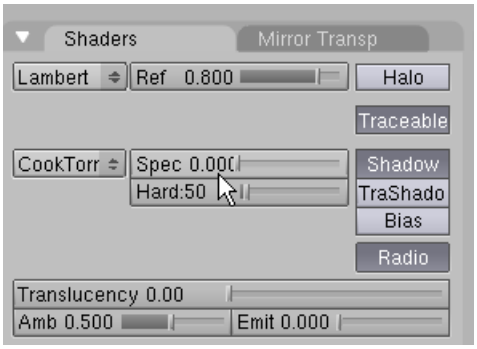


In the Image Panel set the Xrepeat and Yrepeat to 4.

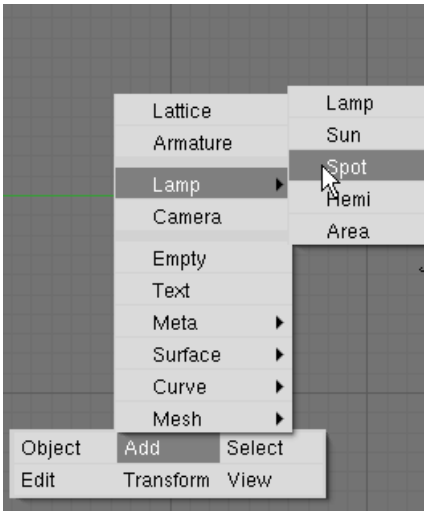


Press the Material Buttons sub-context button (or press F5).

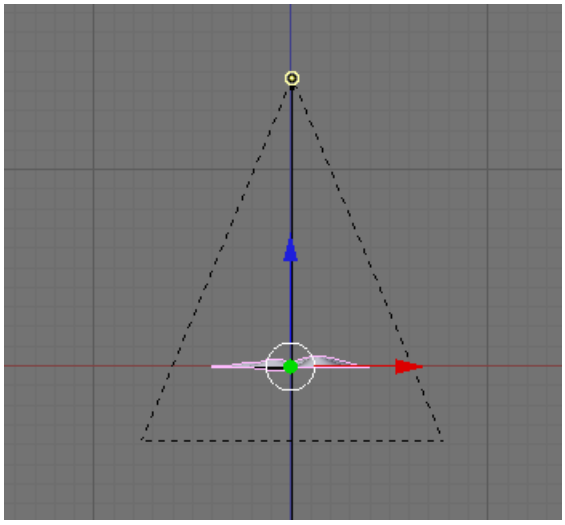
Select the Shaders Tab. In the Shaders Panel set the SPECularity to 0.



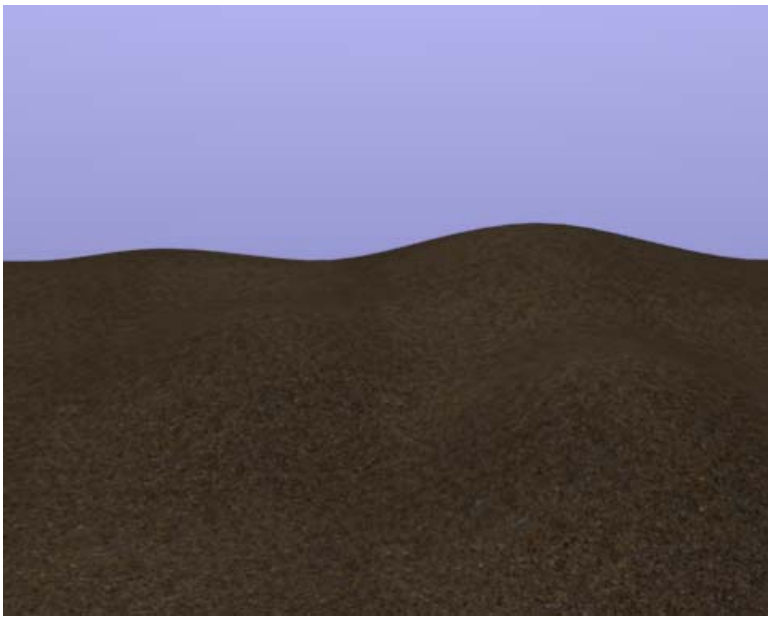
Switch to Top View. Press the AKEY to deselect the Sea Floor object. We will not be using the built-in lighting for this scene. Place your 3D cursor in the center of the plane and press Space / Add / Lamp / Spot.



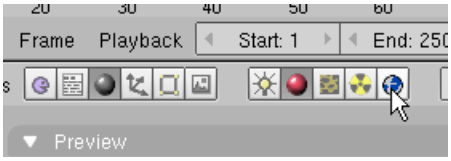
Switch to Front View. Position the Spot Light so that its beam completely covers the Sea Floor object from directly above.



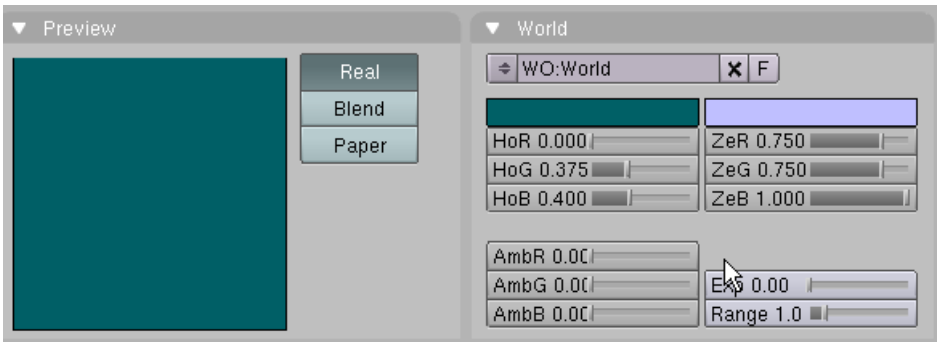
Render F12. Your rendering should look something like the image below.



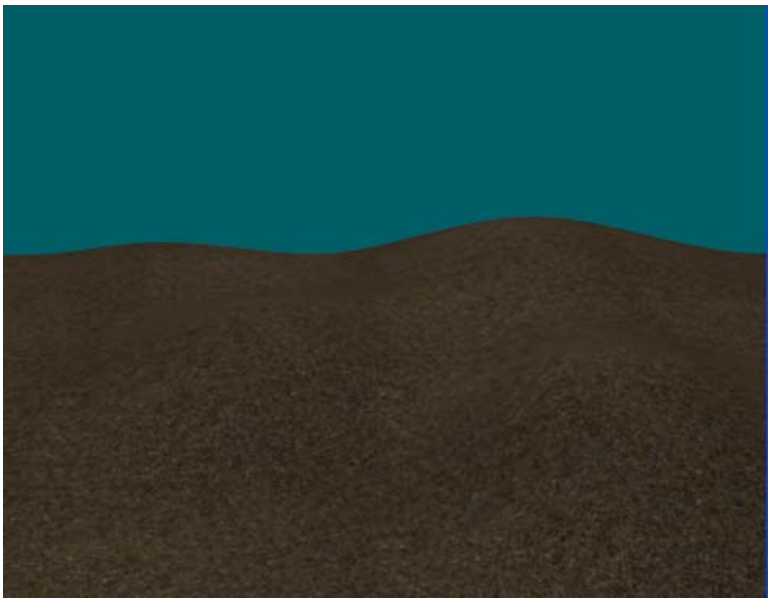
Save your file F2. Press the World Buttons icon.



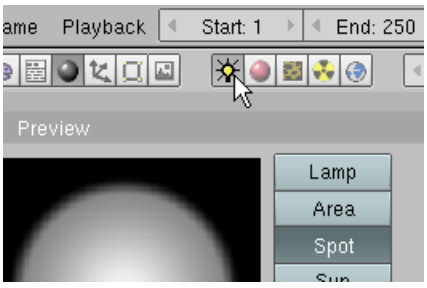
In the Preview Panel select the REAL button only. In the World Panel set the HoR Red = 0, HoR Green = .375 and HoR Blue = .4



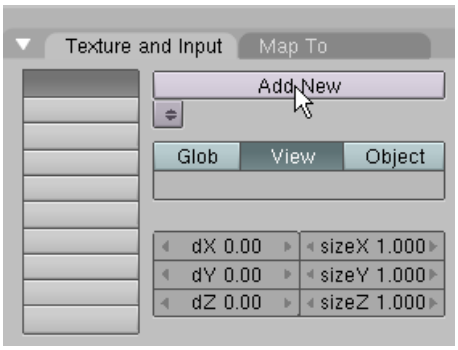
Render F12. This creates a dark Green-Blue background.



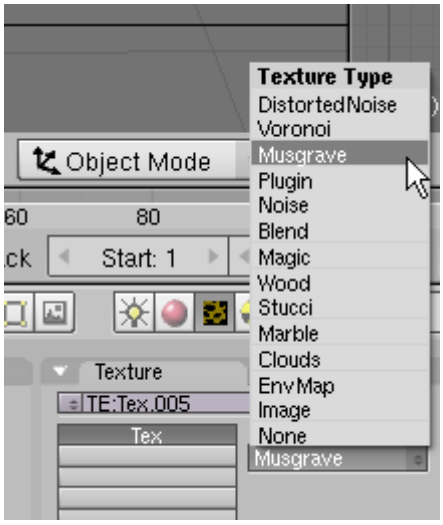
In shallow waters one might see a scattering of shadows formed by the waves of water above. We will simulate this effect by adding a texture to our Spot lamp in effect using it to project shadows on the Sea Floor object. With the Spot Lamp selected press the lighting buttons sub-context icon.



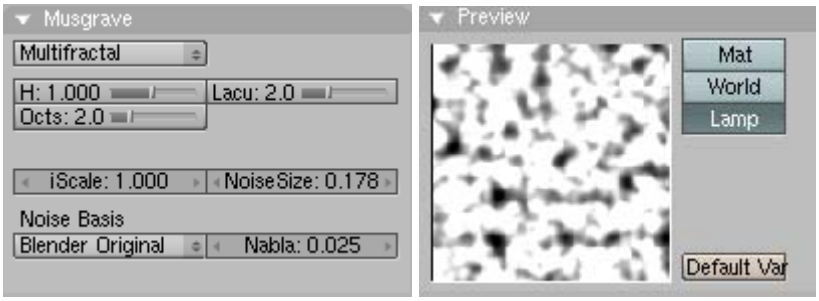
In the Textures and Input Panel press Add New.



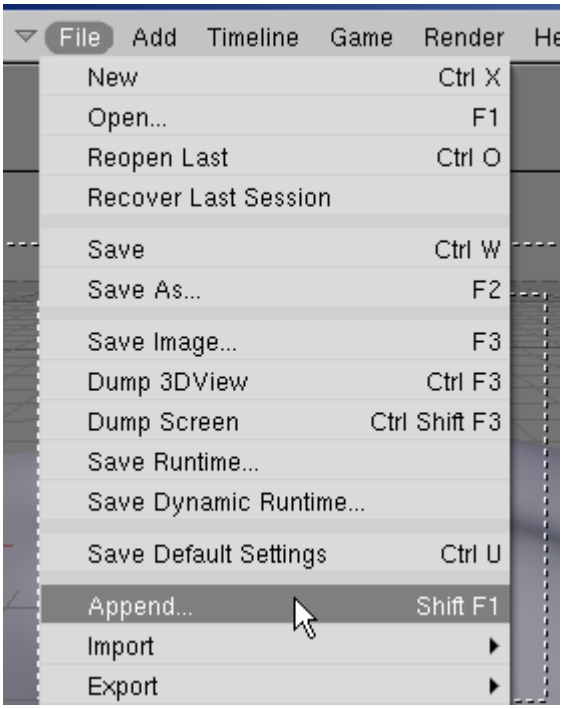
Press F6 (Textures). In the Texture Type dropdown box select Musgrave. This is a built-in Procedural Texture in Blender.



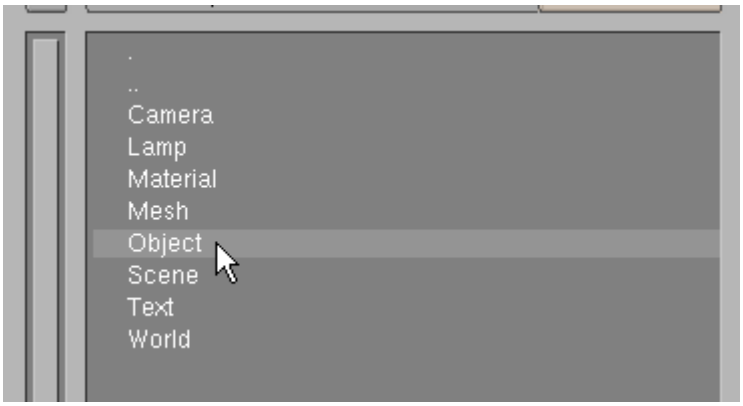
In the Musgrave Panel adjust to the following settings:



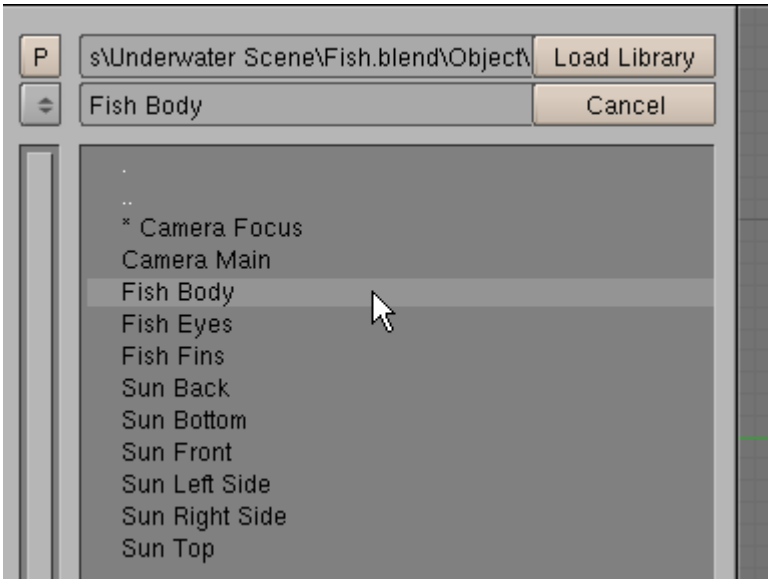
We will now add a fish to the scene. Press File / Append



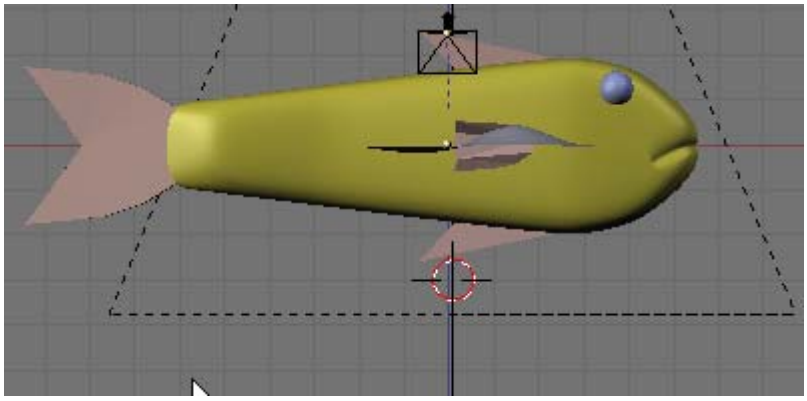
Locate Fish.blend. This file is located in the Underwater.zip file. Click on the file name. This will display the elements of the file. Click on Object.



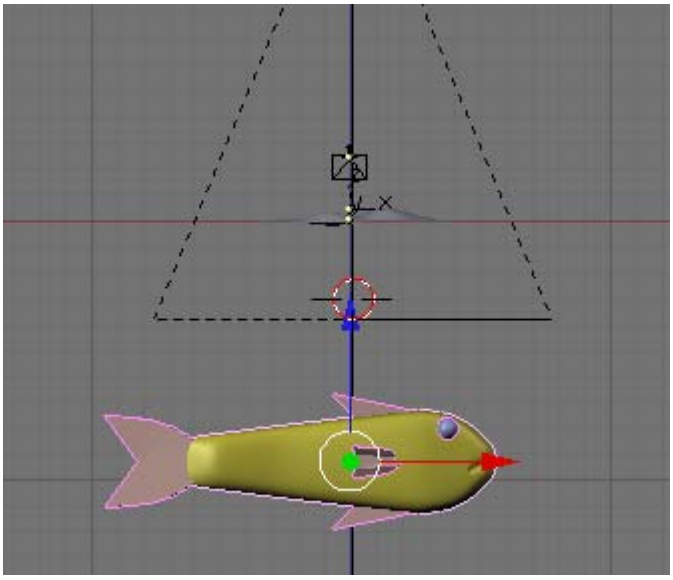
This will display the objects in the file. Select Fish Body and then Press Load Library.



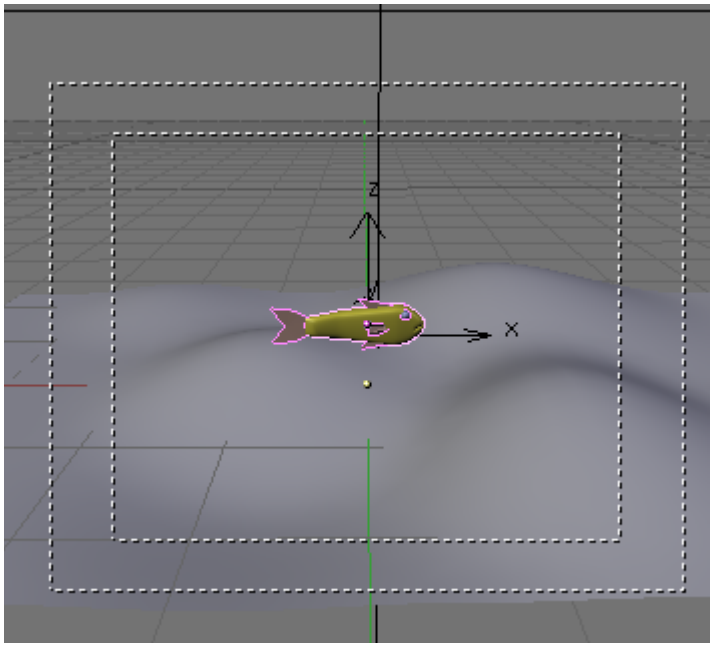
This places the Fish Body into the Underwater Scene. Repeat this process appending the Fish Eyes and Fish Fins objects to the scene.



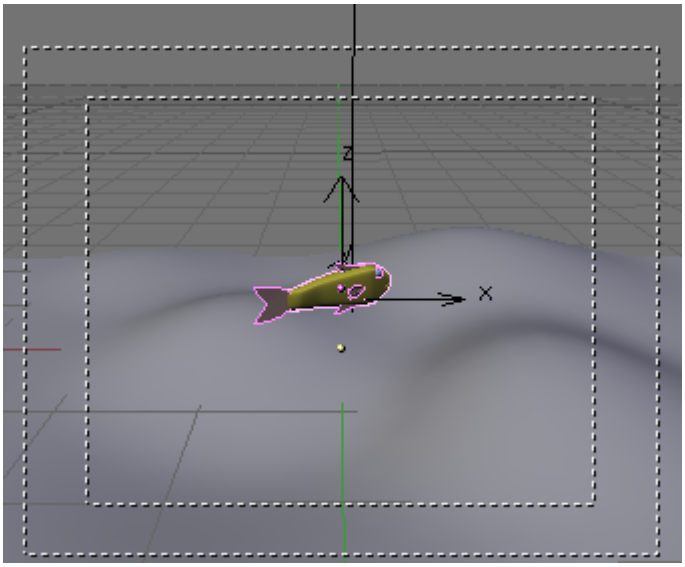
The fish is quite large. Select the Fish Eyes only. Add the Fish Fins to the selection and finally add the Fish Body to the selection. Press CTRL-P (Parent) and choose Make Parent. The Fish Body is now the parent of the Eyes and Fins. Select the Fish Body and in front view move it well below the Sea Floor plane.



Press the SKEY (Scale). Hold down the CTRL Key and scale down the Fish until it is very small (you may have to do this more than once). You can then use the blue transform Widget arrows to put the fish into the camera view.

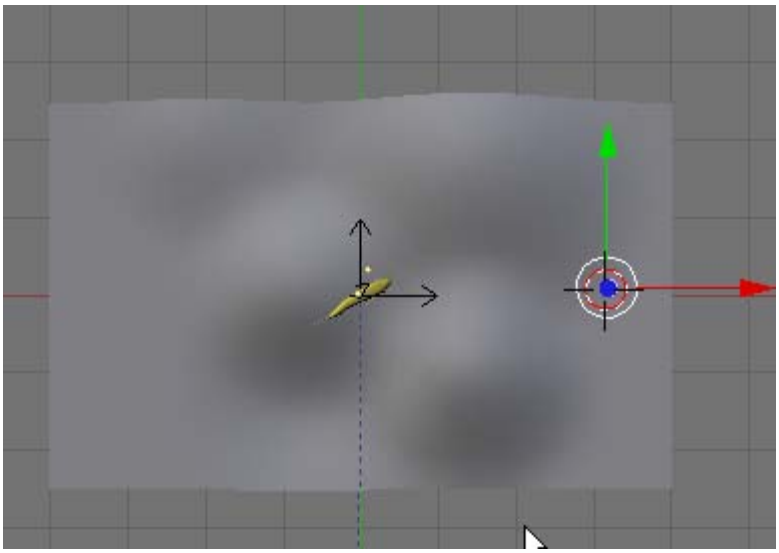


Adjust the rotation and placement of the fish so that it looks something like the image below.

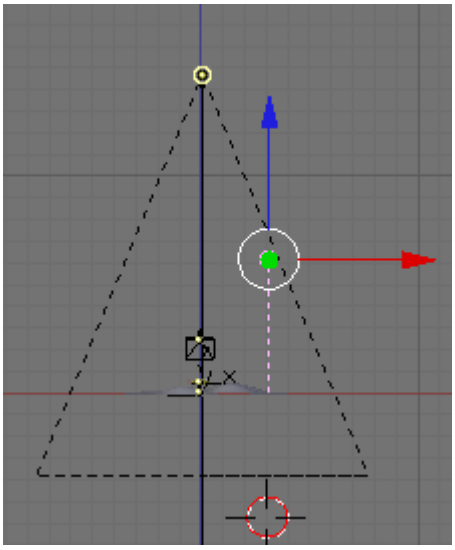


Render F12:

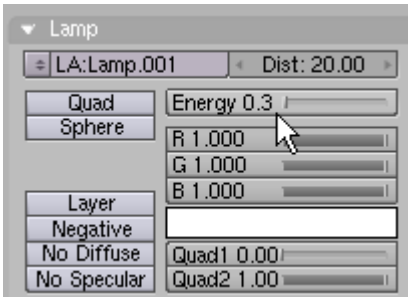
Note that the fish is a bit too dark. Switch to top view. Place your 3D cursor on the right of the Sea Floor and press Space / Add / Lamp / Lamp.



Switch to Front View. Raise the lamp up as shown below.



In the Lamp Panel set the Energy slider to .3.



Render F12.

A finished copy of this tutorial named UnderwaterComplete.blend is located in the Underwater.zip file.