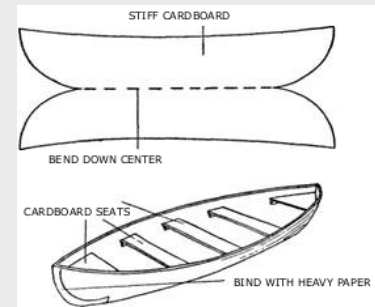


Making an Escape Boat in Blender

By Calvin Culy

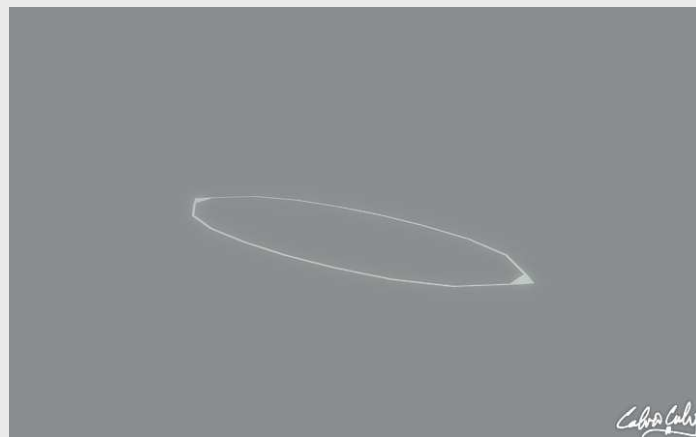
Before You Start

It's always good before you begin any project to do some research. Find images online of different variations of what you're planning on modeling and find a couple angles so you don't miss any important details. Since this is a simple model and part of a bigger project, I felt one image was sufficient.

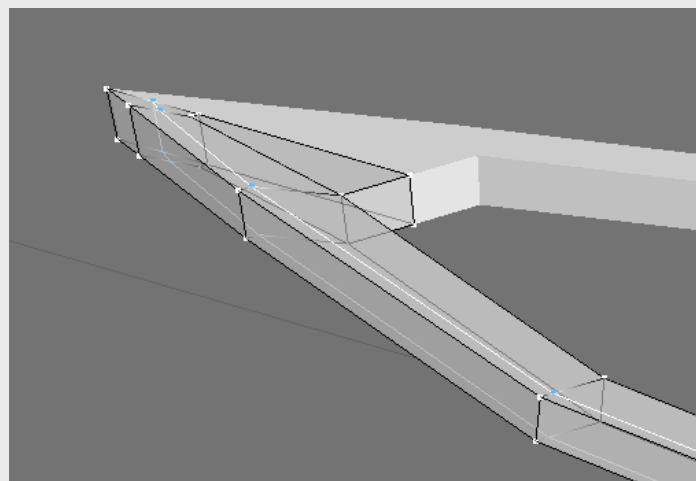


Making the Boat

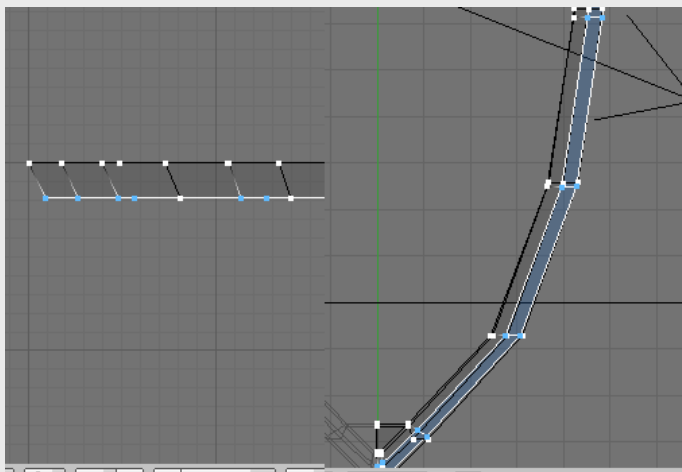
In blender I've got a default scene open with a ground plane that has a material where it will only show shadows. To start I've inserted a plane and extruded it around in the shape of the boat from the top view using the E key. I only made one fourth of the boat and then enabled the Mirror Modifier with both the X and Y axis enabled. You can see as well that on both ends I drew out a point and made a triangle like shape.



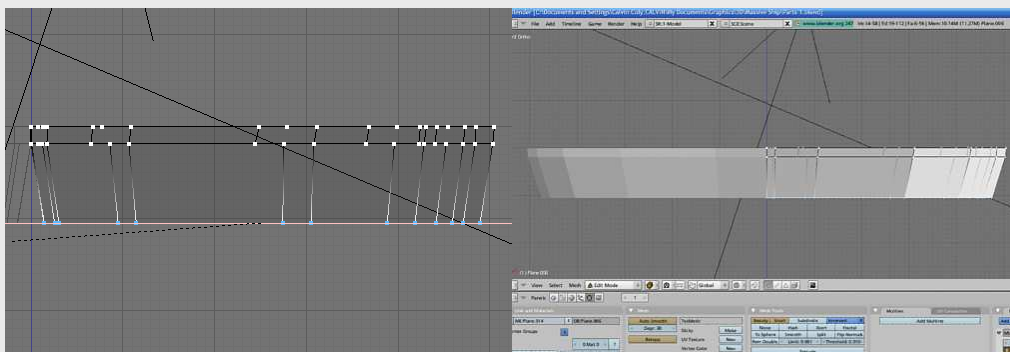
Next I selected all of the vertices and I extruded them downward. Then I scaled them in just a tad and using Ctrl+R I added a new edge loop in the middle of the two rows of existing vertices.



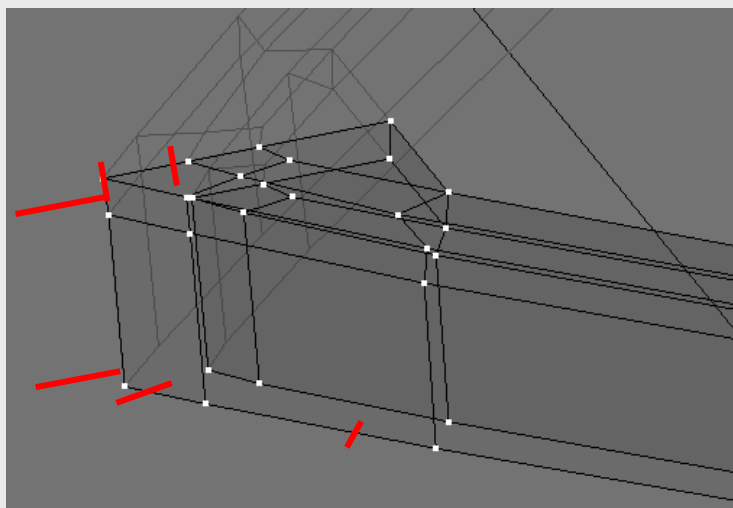
In this screenshot you can see that how much I've scaled in my downward extruded vertices and how I added the new edge loop in the middle of the existing vertices. Then I selected just the outer two layers of vertices on the bottom row. This way when I continue extruding downward there will be a rim left at the top of the boat on the inside.



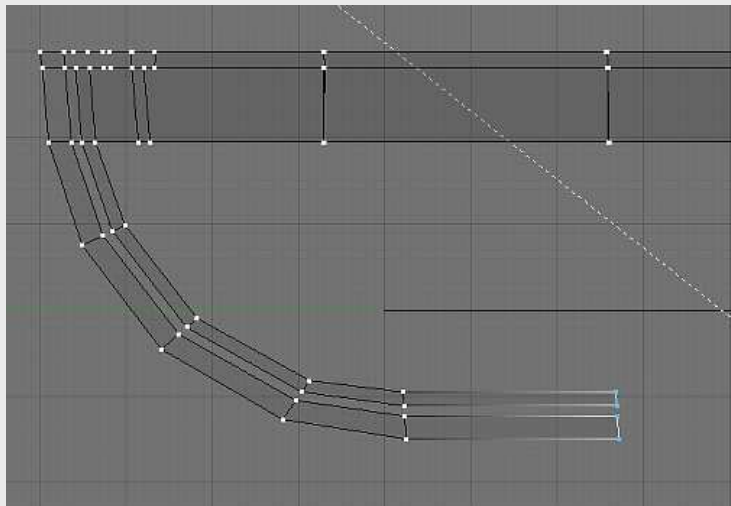
Now I've extruded another row of vertices down. I also scaled them inward and then I lined them up along the object's center so they mirror correctly. You can already see how the boat's shape is coming in.



In this screenshot it's a little hard to tell what I did, but basically I removed the edges between the vertices that weren't needed. I removed the edges connecting the vertices on the edges that touched the axis and on the very bottom. The edges I removed are labeled in red.

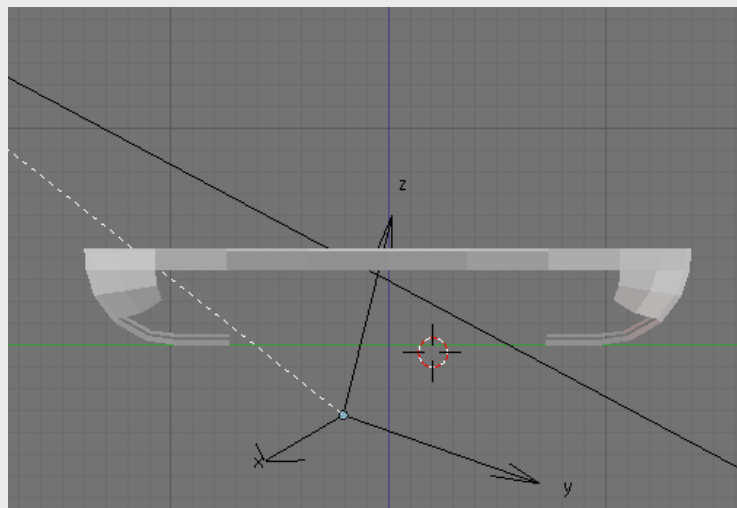


Now it's starting to get interesting ☺. I selected the very front edge of the boat where its kinda pointy and in the side view began extruding down and in, bringing it under the boat. As I'm doing this I'm constantly checking back to my reference image to make sure my proportions are correct and that the shapes are correct. When I start working on an object I'll model in more exact terms as in extruding straight along the Y axis and then later I might make adjustments to make the shape more realistic.

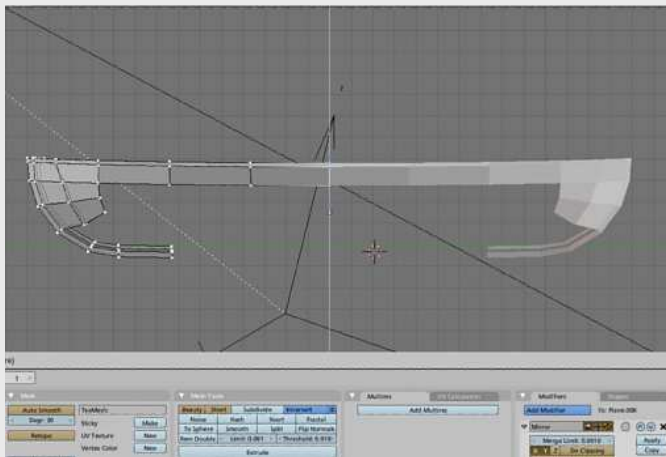


You can see here that because of my Mirror Modifier, even though I've only had to edit ¼ of the model I get a bigger picture of what it will look like as the other parts are duplicated. This helps cut down on the overall amount of vertices I need to worry about as well as helping me better see how my model is turning out. I also began filling in a bit more of the hull.

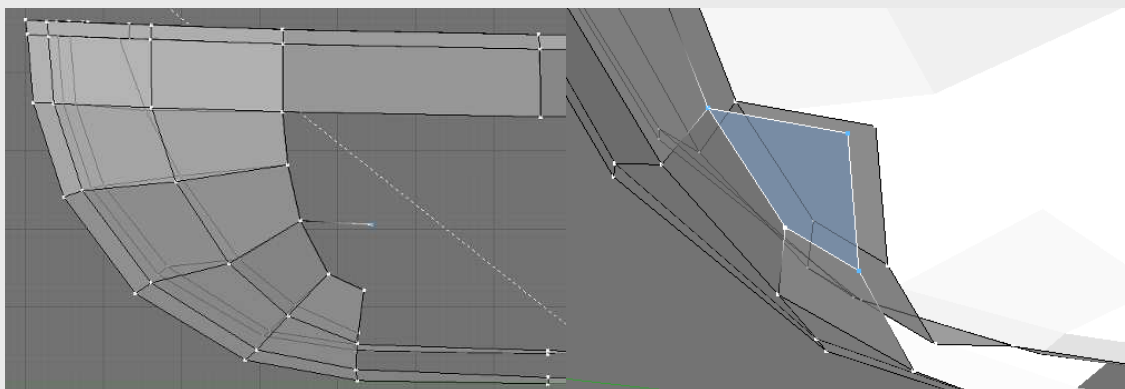
The tricky thing here was that there was the outer hull and then the inside of the boat so I had two layers of vertices that I was extruding while trying to keep them at relatively the same distance from one another to keep the "width" of the hull consistent. In doing this I simply had to be careful to rotate my view around and make sure that everything was looking as it should.



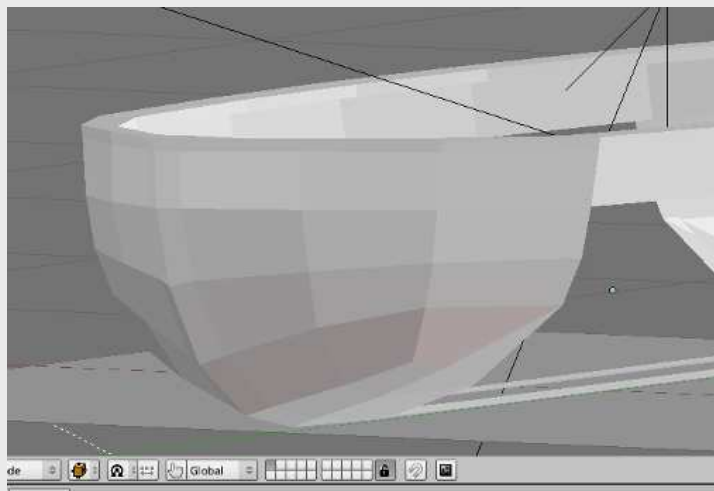
In this image I made the entire middle of the boat slant downwards. I did this using proportional editing (O key) I pressed the O key and then selected the Sphere Falloff curve. Then I selected just the middle vertices on my boat along the blue line you see in the screenshot. I hit G to grab the vertices and moved them just a bit downwards along the Z axis. Before I clicked I scrolled with my mouse wheel to increase the falloff distance and to make the entire length of my boat "sag" in towards the middle.



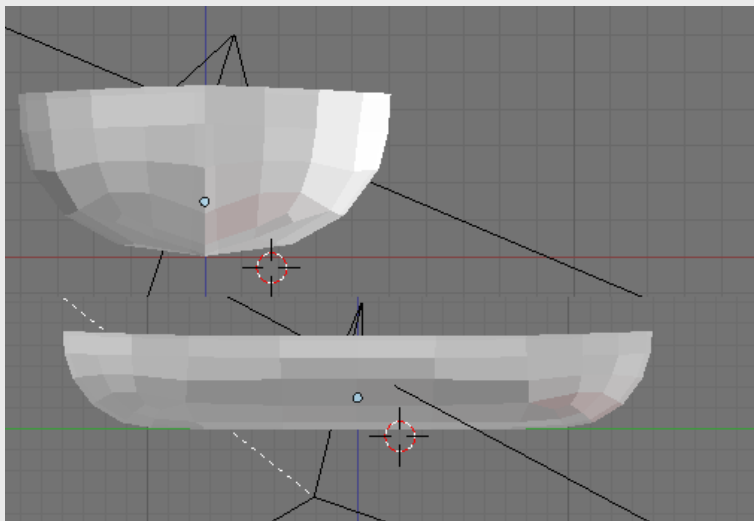
Here I'm just continuing to bring vertices down and around on the hull's end. I'm constantly switching between side, front, and perspective view to make sure I get the curving shape right.



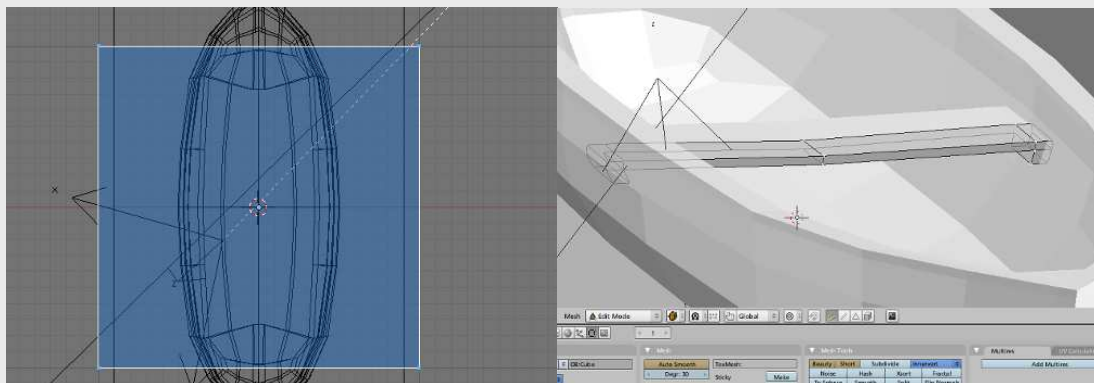
I've finally finished the ends! This was the trickiest part in getting the shape right and I went back and tweaked it a lot before moving on.



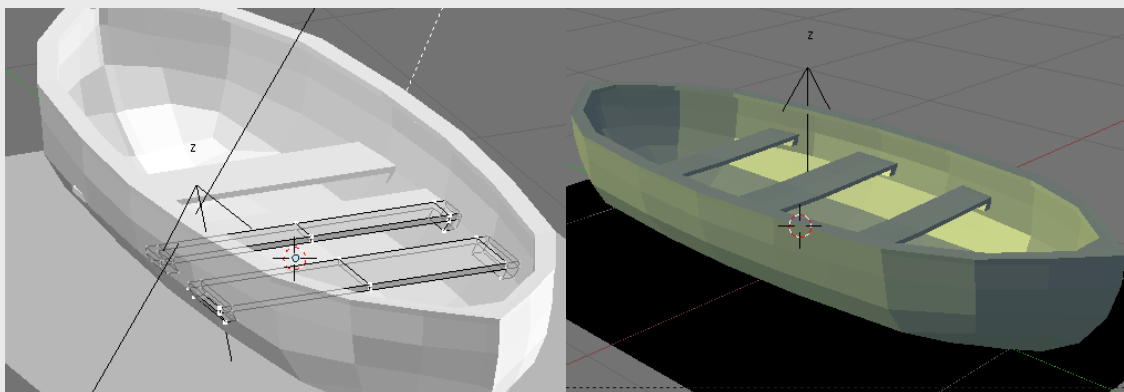
Next I checked the front view to make sure the hull had the shape I was going for and then I extruded inwards the rest of the hull and adjusted as needed to get the right sag and curving shape. To make sure the vertices matched along the axis I selected them when they were close and scaled them in quickly along to line them up on their axis a few times before moving them along the objects center. Sometimes I'll add a Subsurf modifier momentarily just to make sure that the vertices are really "snapped" on the axis for the Mirror modifier as the subsurf modifier adds extra points between vertices that will pull away from the center leaving holes if they haven't snapped.



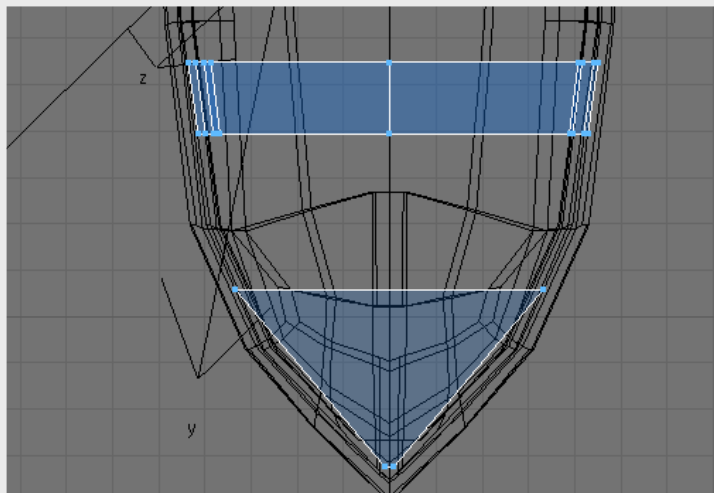
Now it's time to add the boats seats. I insert a cub and scale it so that it is long, skinning, and short. Then I add three new loops using Ctrl-R, scrolling my mouse wheel up until I see 3 purple-ish lines, and clicking to activate the new rows. I then selected the two newly added outer rows and scale them along the X axis to bring them right near the edges of the seat. I then extrude the bottom outside parts of the seat to get those hooks on the end that you see on the right. Finally I grab the center row of vertices and pull them down a bit to give a look of wear and tear.



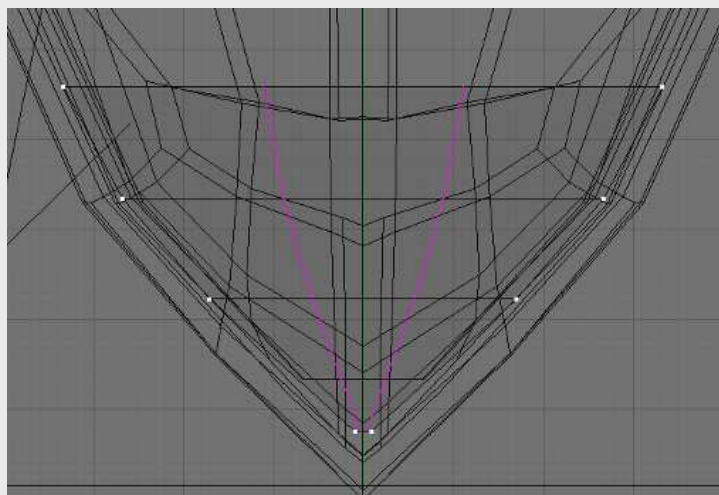
Here I duplicated the seat and then cut the first in half so I could add another Mirror modifier along the Y axis to make editing easier. This outer seat I had to scale on one end to make sure it fit the contour of the boats inward curve. And here is a shaded view so far of the boat. It's coming along!



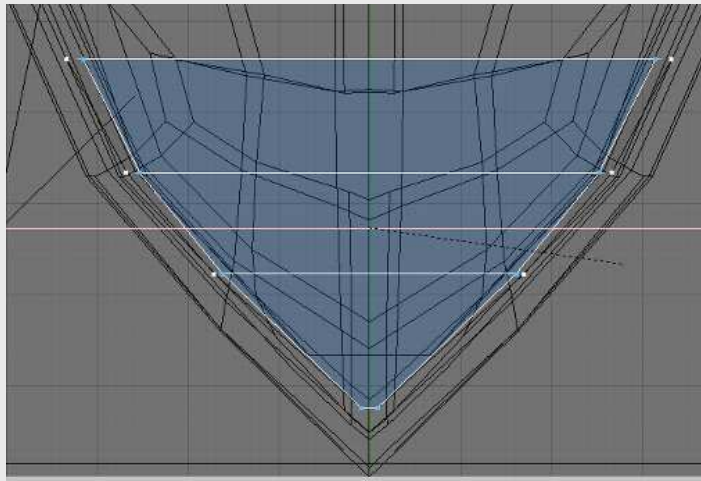
The final step is to add the final seats which are on the two ends of the boat and are triangular in shape. I add another plane and scale the one end down until the vertices are quite near each other, but I don't change it into a triangle.



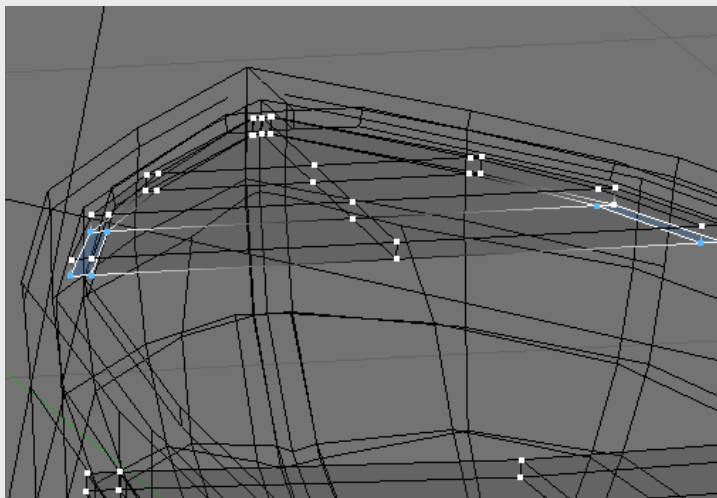
Inserting edge loops again with Ctrl-R and scrolling the mouse wheel I add two horizontal loops and scale them along the X axis so they fit the curve of the boat and then add two vertical loops.



I scale these vertical edge loops out until they are quite near the outer row.



As I did before I select the bottom outer vertices, but only on the end in this case and extrude them downward to create the appearance of wood blocks that add support to the seat. Final touches such as pulling down the center of this seat and adjusting the ships shape to look better are done and then I can render it!



And here's the final image. Hope this tutorial helped!

