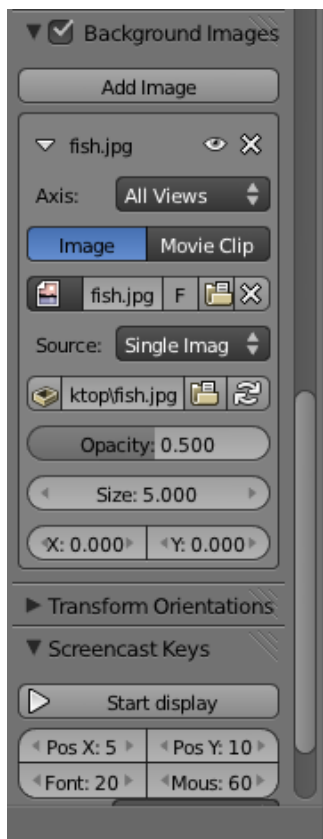


Model a Fish

Download this image from the VC, in the Pictures folder. It is called **fish.jpg**.



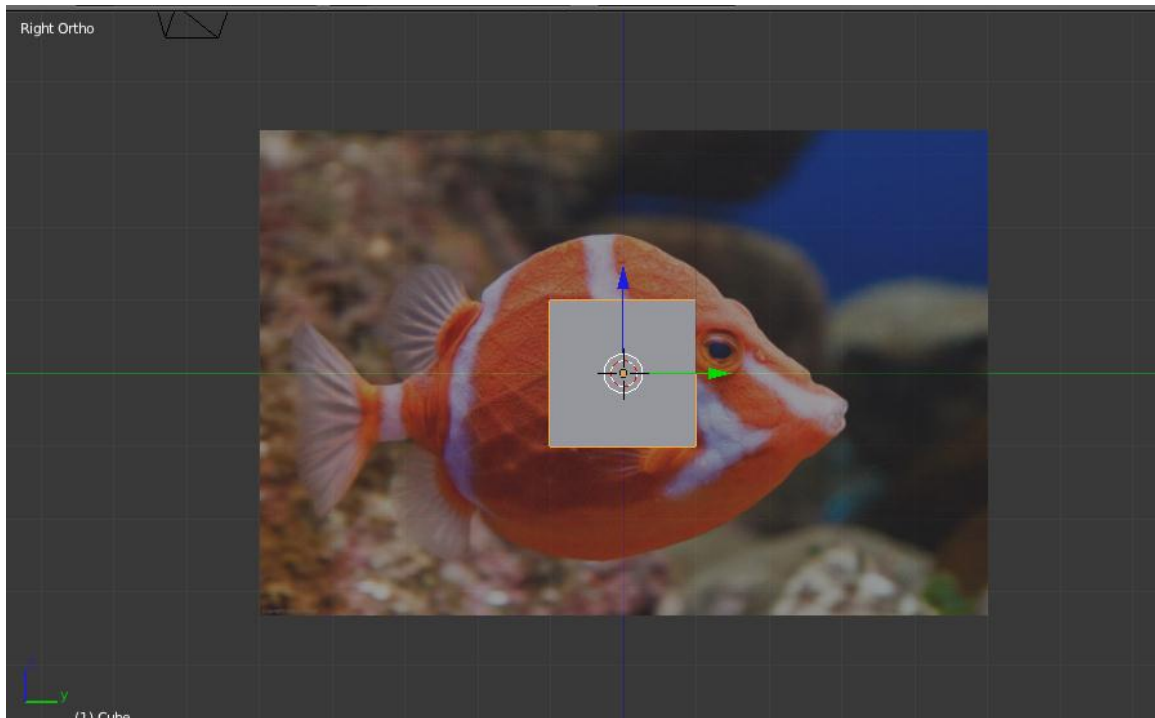
Add it as a background in Blender.

Press N to open the tool panel.

Locate Background image (tick the box) and click the grey arrow.

Open the image.

Press Numpad 5, then Numpad 3. This changes the view to Right Ortho.



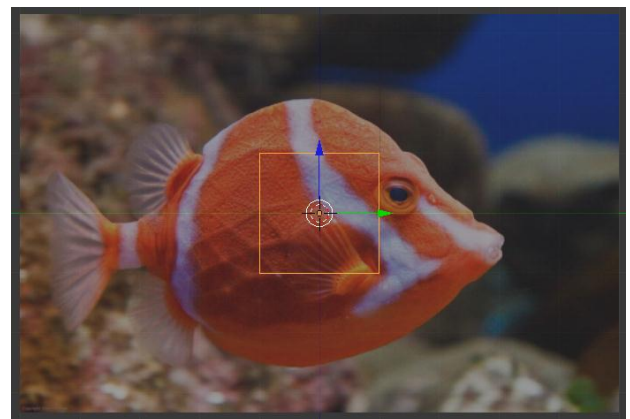
Press Z to change to wireframe mode. The cube will go see-through.

Press X to delete the cube.

Add > Mesh > Plane.

Press RY90 to rotate the plane 90 degrees on the Y axis.

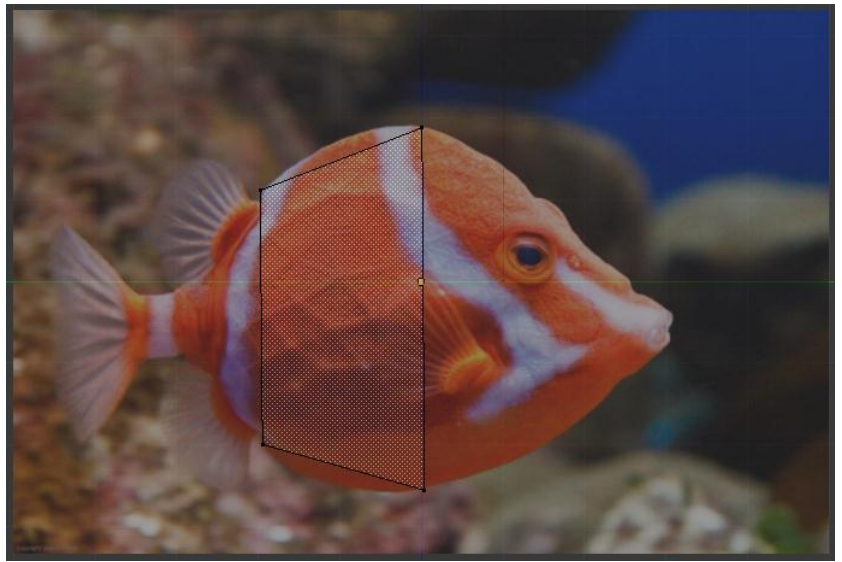
It should look like this:



Press Ctrl + Space to turn off the axis widget.

Press TAB to go into edit mode.

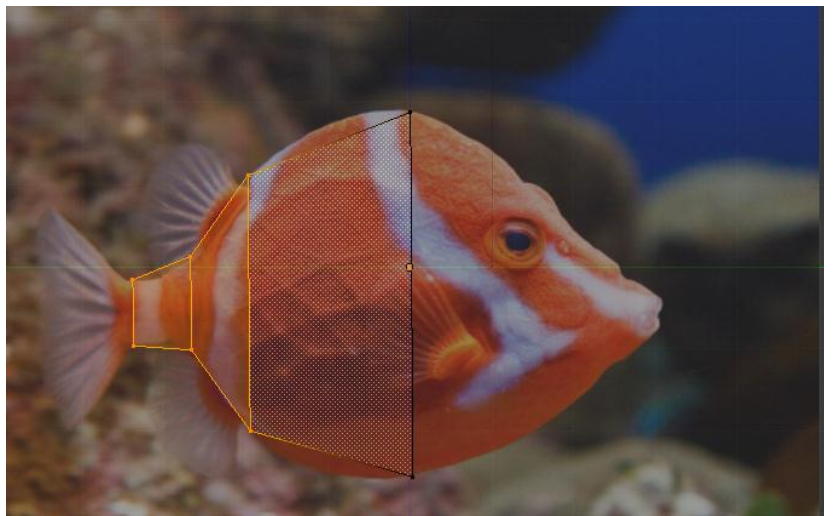
Grab (G) the verts of the plane as shown in the image to the right.



Select (C) the two left most verts.

Extrude (E) them towards the tail.

Scale (S) them in, so it looks like the image to the right.



Press A to deselect.

Select the two right most verts (C) and extrude out the head of the fish.

Remember you can move single verts by selecting them and pressing G.

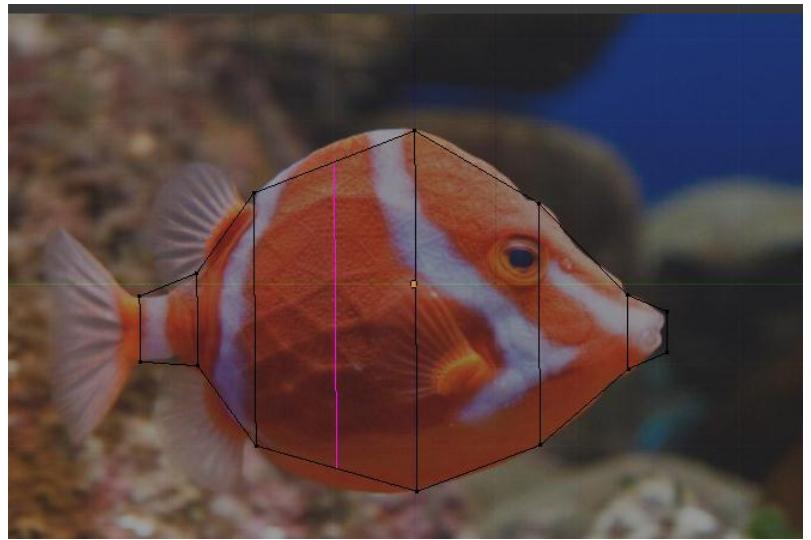


Press A to deselect.

Press Ctrl+R to loop cut (pink line) the fish's body.

Double click the LMB to accept.

Grab the top vert and drag it up so it forms the fish's back. Then grab the bottom vert and drag it down, so it forms the fish's tummy.



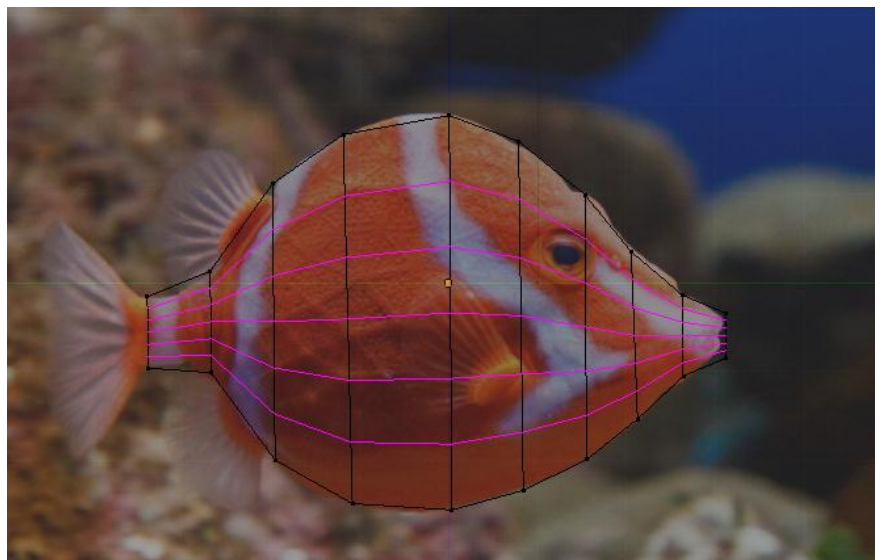
Do the same for the head.

The two orange lines in the image to the right, are new loop cuts.

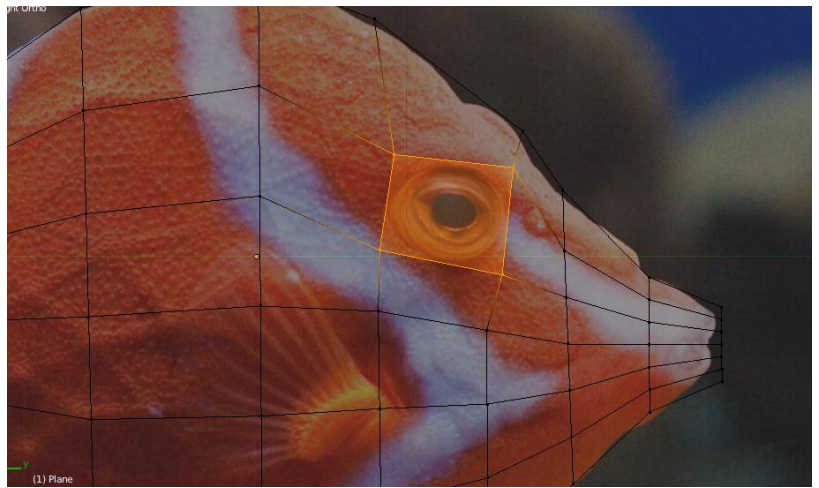


Loop cut the fish across its entire body. While the line is still pink, roll the MMB up four times so more pink lines appear.

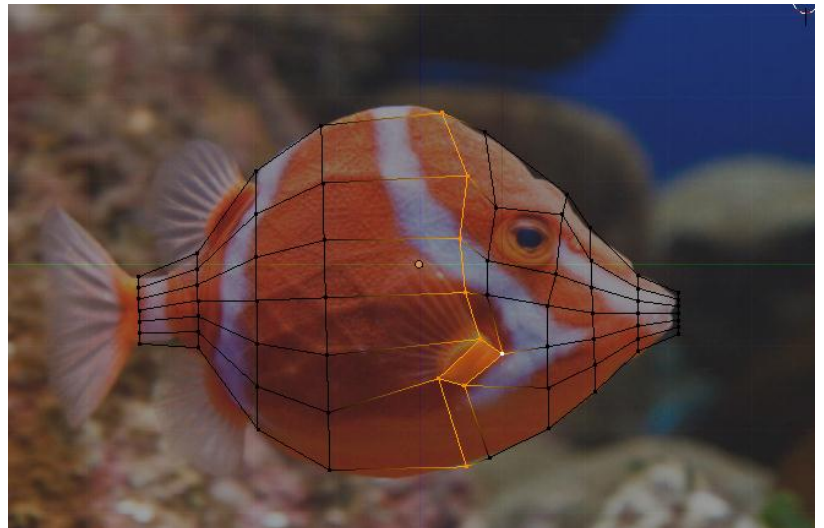
Copy the image to the right.



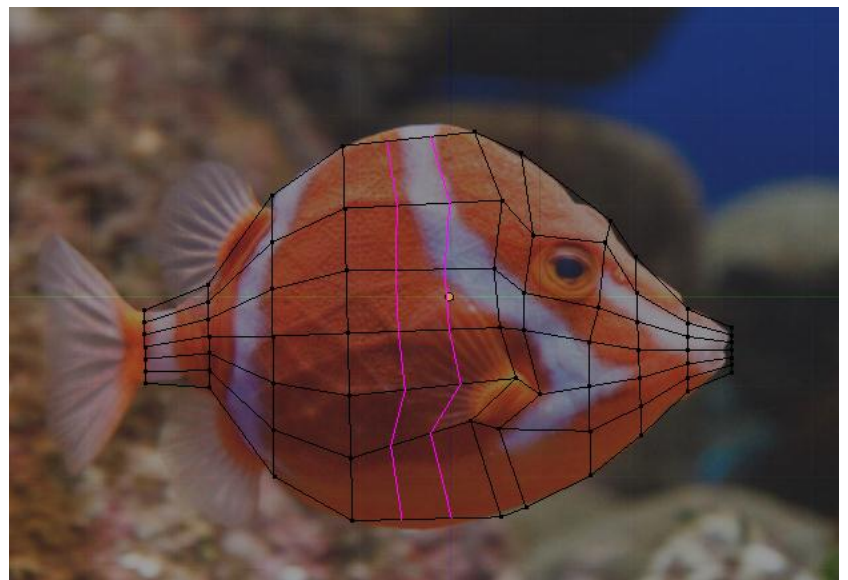
Zoom in and move the four verts around the fish's eye, so they look like the picture to the right.



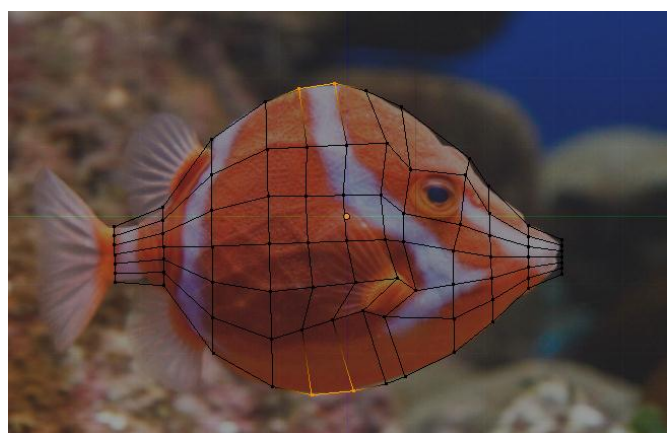
Move the verts like shown in the image to the right. Make sure you create a rectangle where the fin will come out of the fish's body.



Loop cut the fish.



Move the two top verts to form the fish's back, and move the two bottom verts to form the fish's tummy.

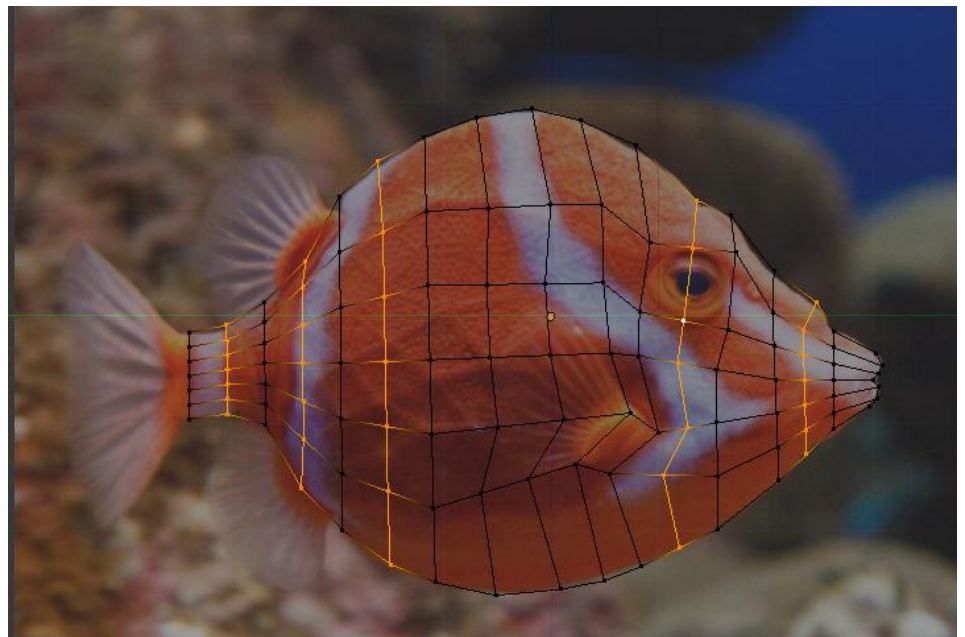


Zoom in and move the verts for the fish's mouth.



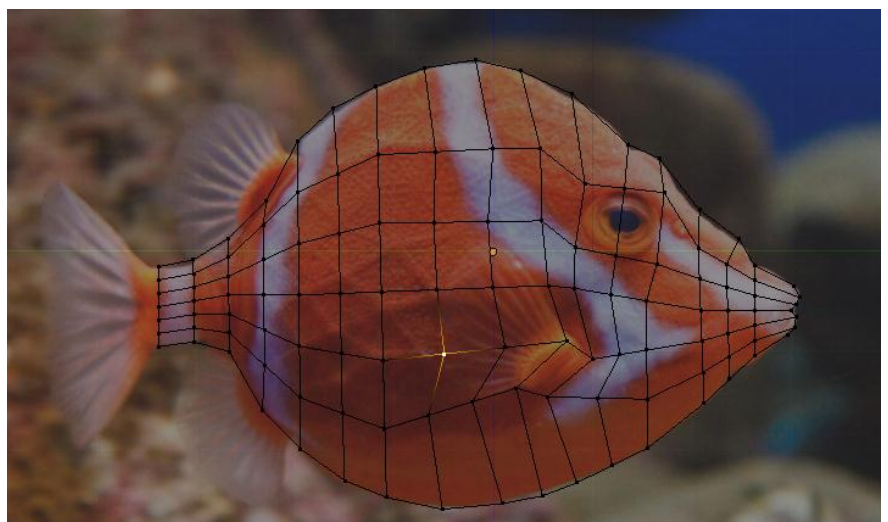
Loop cut the fish in the
paced shown in the
image to the right.

Move the verts around
so they make the fish's
shape smoother.



Deselect (A) everything.

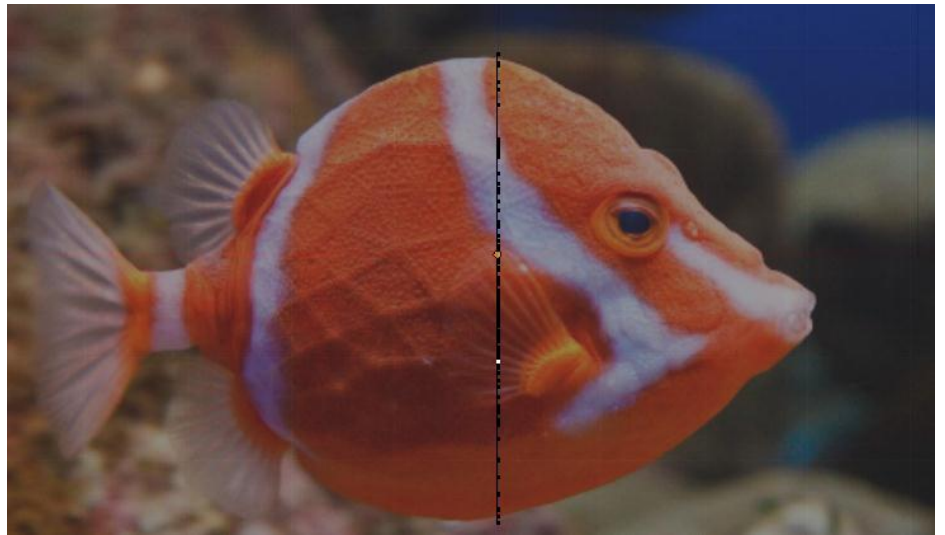
Select the vert shown in the
image to the right.



Press Numpad 1.

You are looking at the front of your fish model.

Press O (not zero).

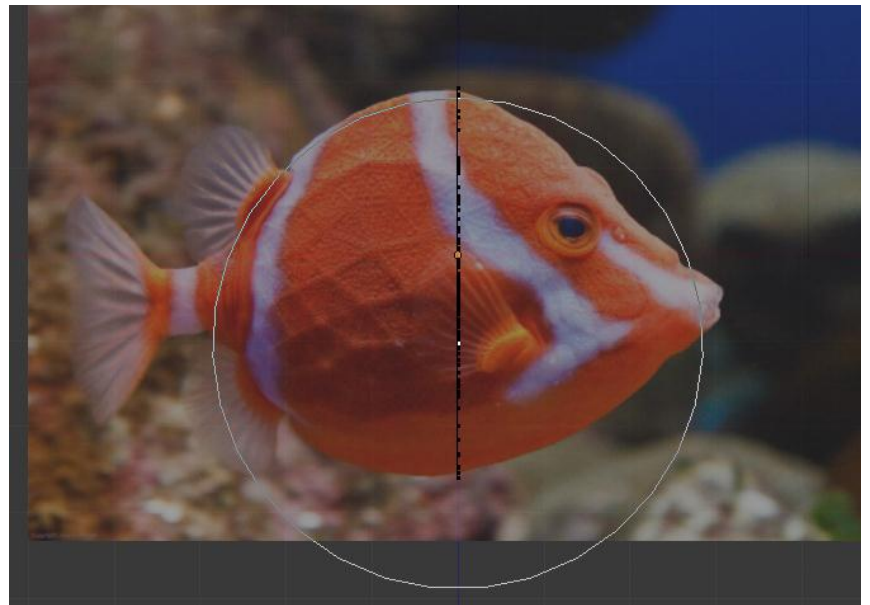


Make sure that vert is still selected.

Press G.

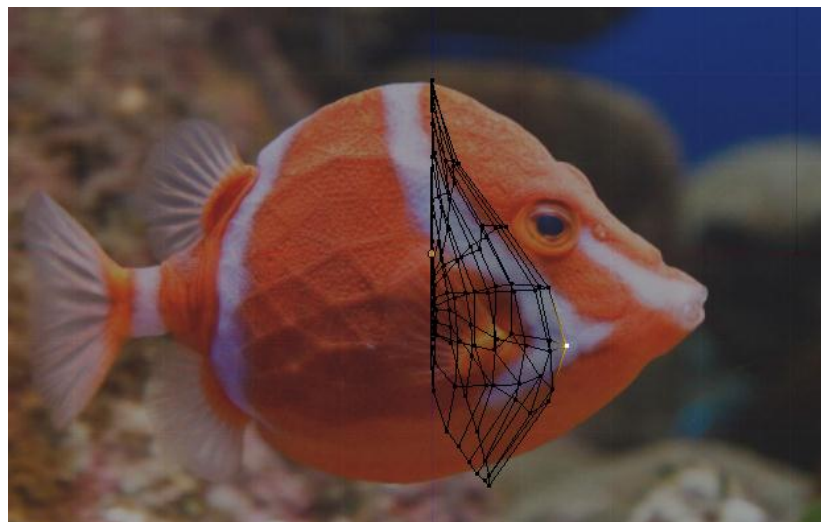
A circle will appear.

Roll your MMB so that the circle is the same size as the one in the image to the right.



Press GX, then drag your mouse to the right.

This forms the 3D shape of your fish's body.



Rotate your view around and see what you've accomplished.

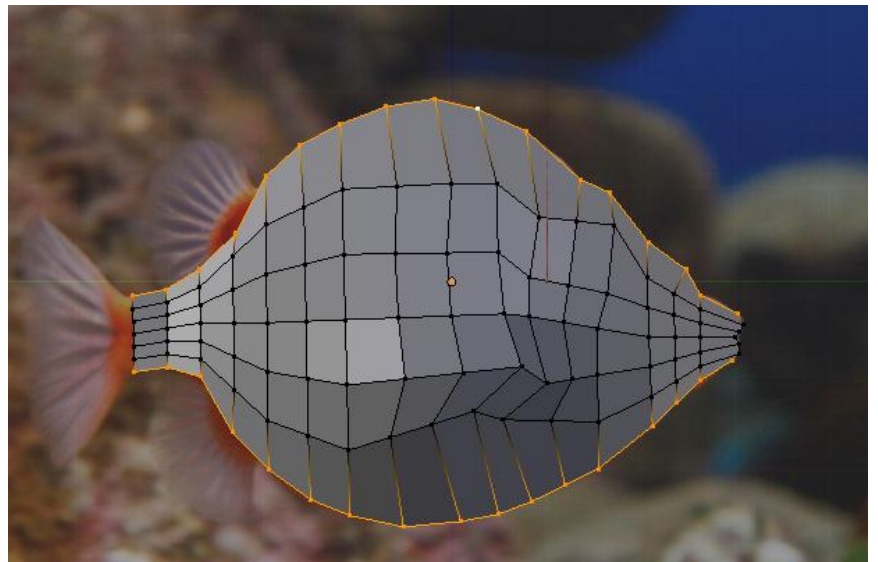
Save your work as fish.blend

Press Z to see solid mode.

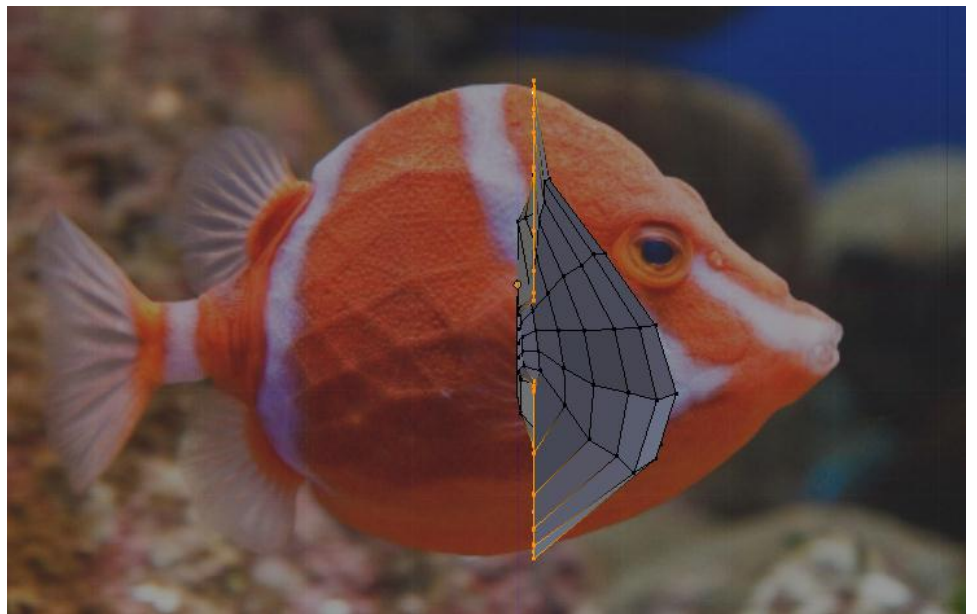
Press Numpad 3 to go to side view.

Select the top and bottom verts.

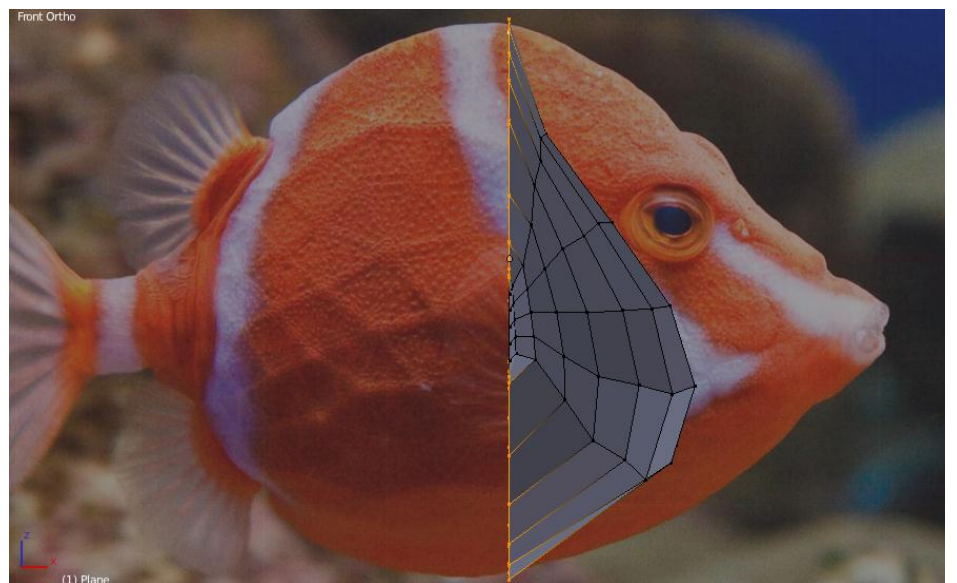
Switch to front view (Numpad 1)



Press SX0. This will align all selected verts to zero.



With the same verts selected, press GX and move them to the left, as shown in the image to the right.

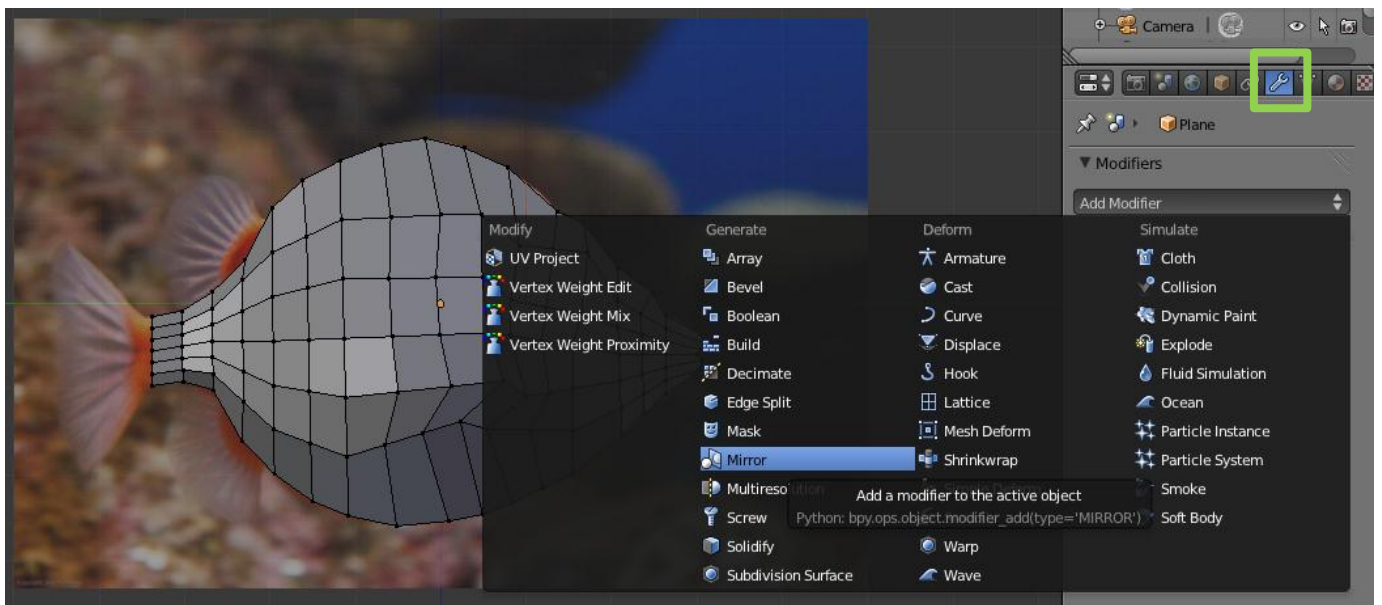
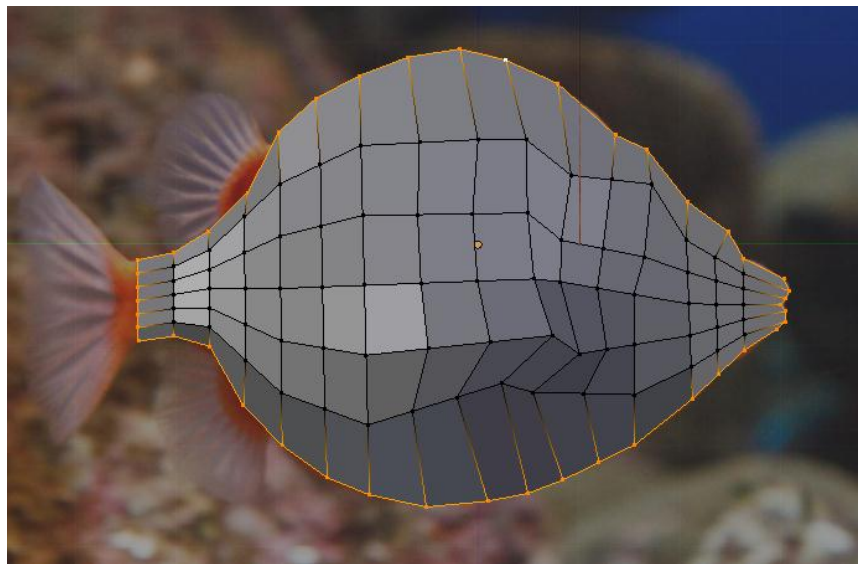


Change to side view (Numpad3) and select all outside verts.

Press SX0.

This aligns them all on the X axis.

Deselect all verts (A).

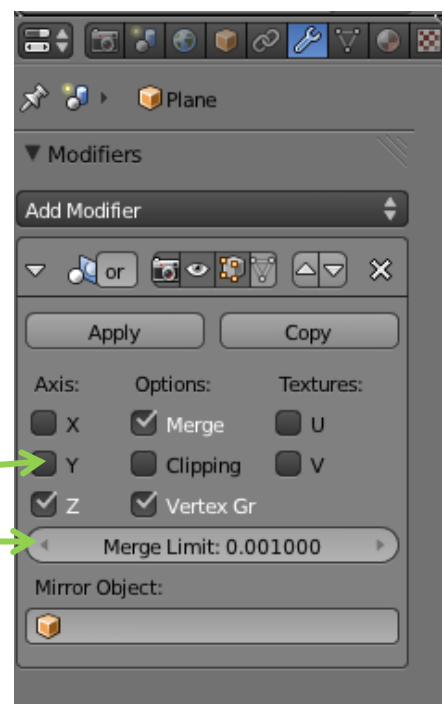


Click on the wrench icon (green square) and click on the Add Modifier button.

Select Mirror. This makes Blender mirror your fish, so that it now is a full 3D model.

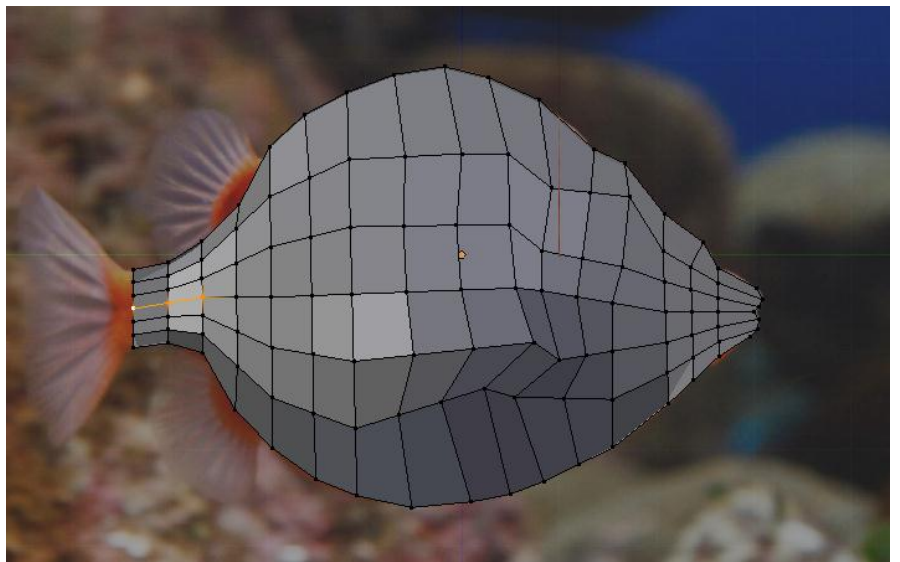
Click off the X axis.

Click on the Z axis.



Save.

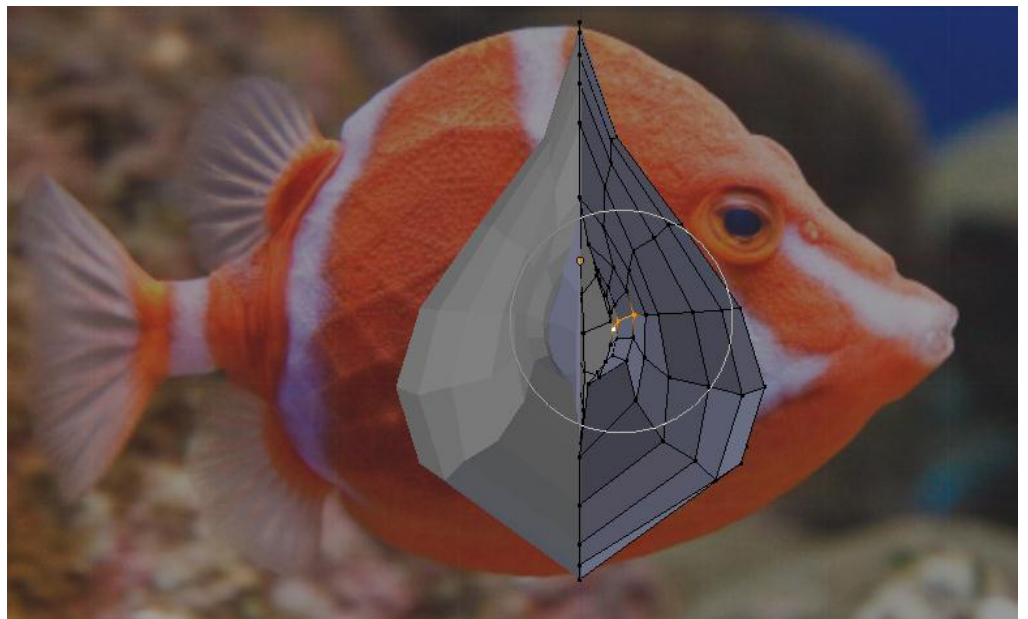
Select the three middle tail verts.



Press O (not zero)

Press G.

Use the MMB to change the size of the circle to the size shown in the image.



Drag the verts out (on the X axis) so they look like the image.

Press O (not zero) to turn the circle editing off.

Now it's up to you to shape the head of the fish. Use all of the skills you have learned above to make the fish. Remember that you should keep the fin and eye rectangles roughly in the same place as we made before.

Save.

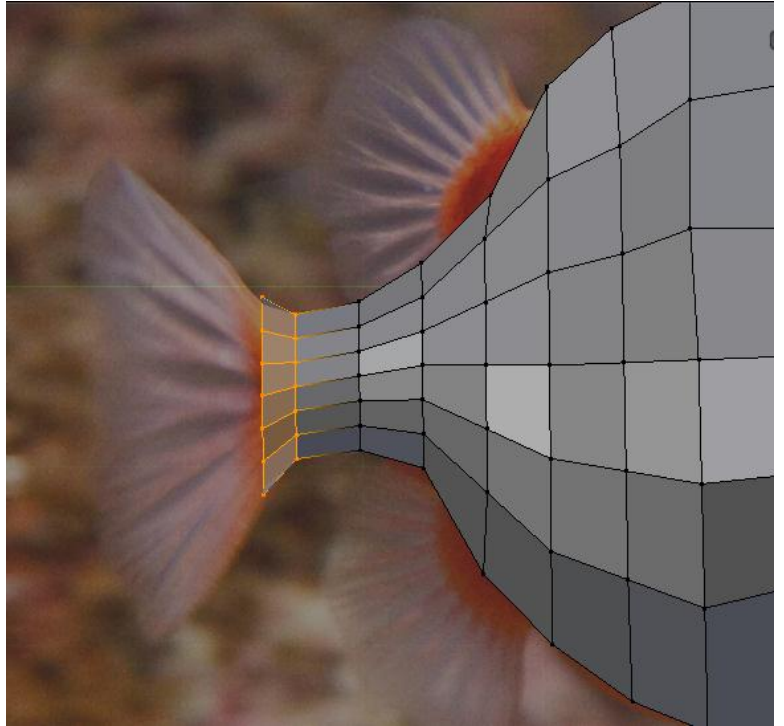
Adding fins

Zoom up on the tail.

Select the end verts and extrude (E) them out.

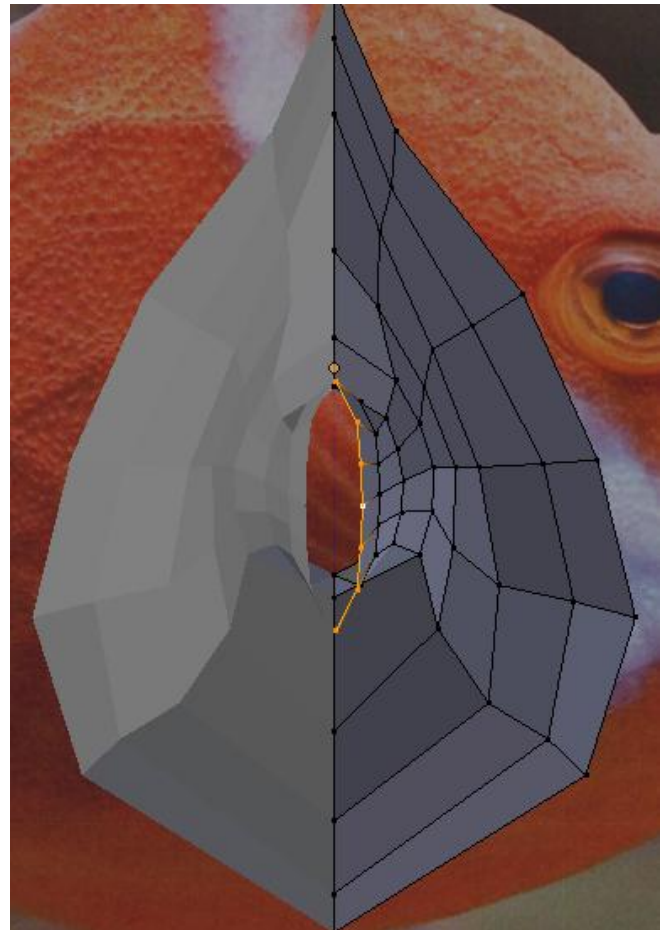
Select the last two rows of verts on the tail (as shown in the image).

Switch to Front view (Numpad 1).



Press SX, then drag the mouse. Make the tail squashed in like the image.

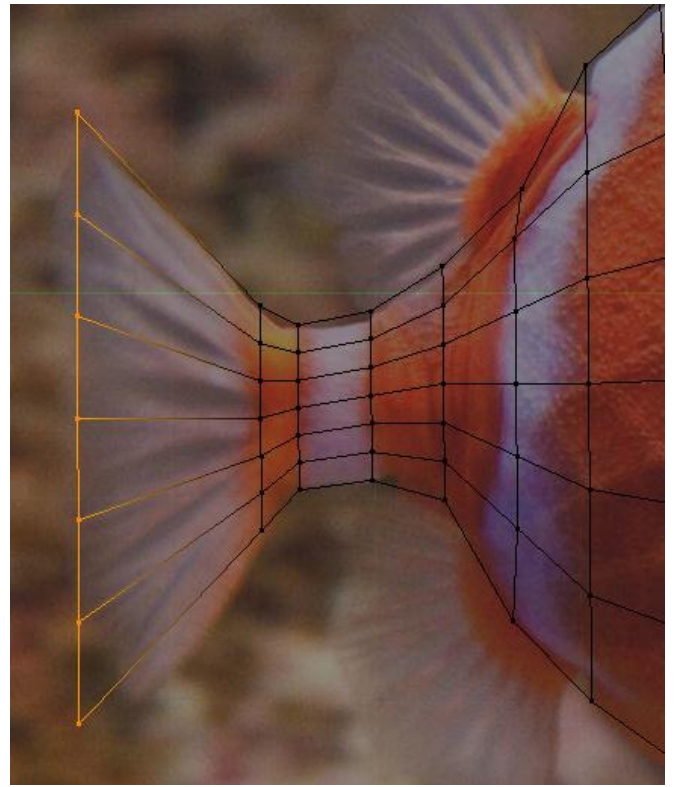
Press Numpad 3.



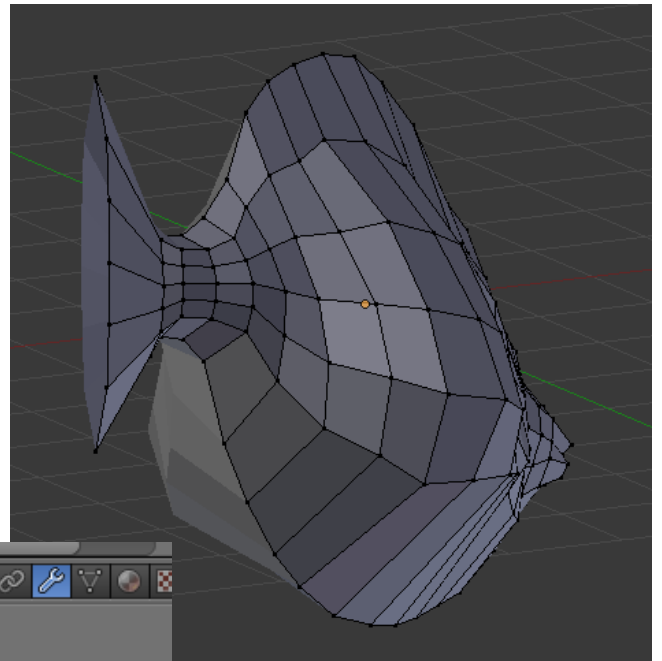
Select the last row of verts.

Extrude (E) them out to the end of the tail.

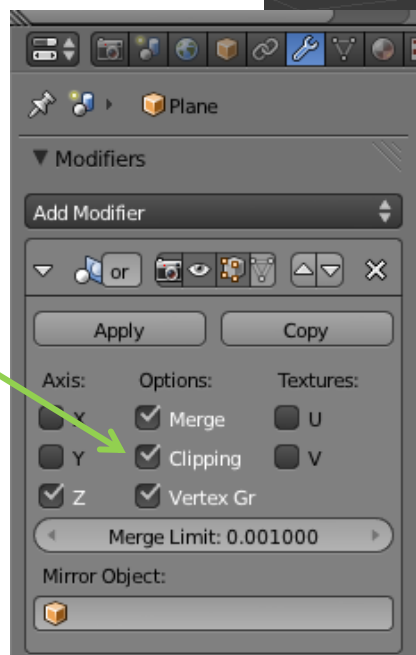
Press SZ to scale them up on the z axis.



Rotate the view around so it looks like this:

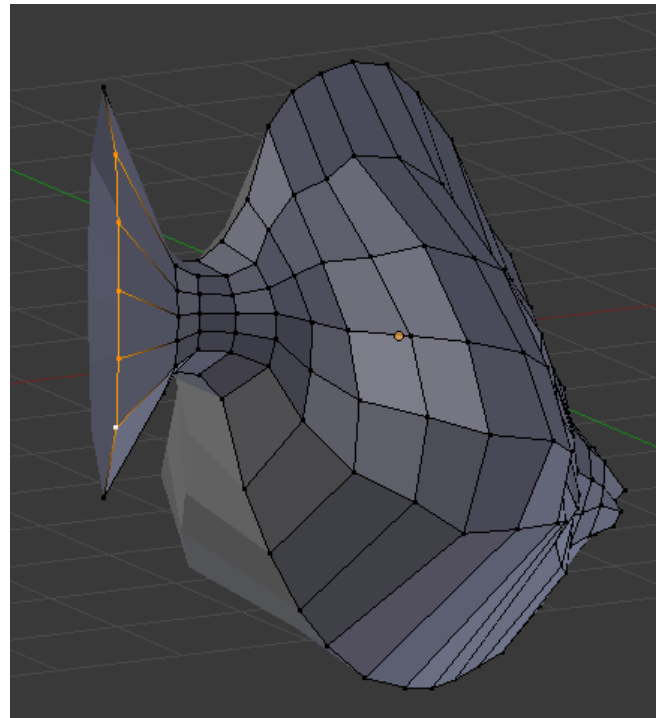


In the modifier menu click **ON** clipping.

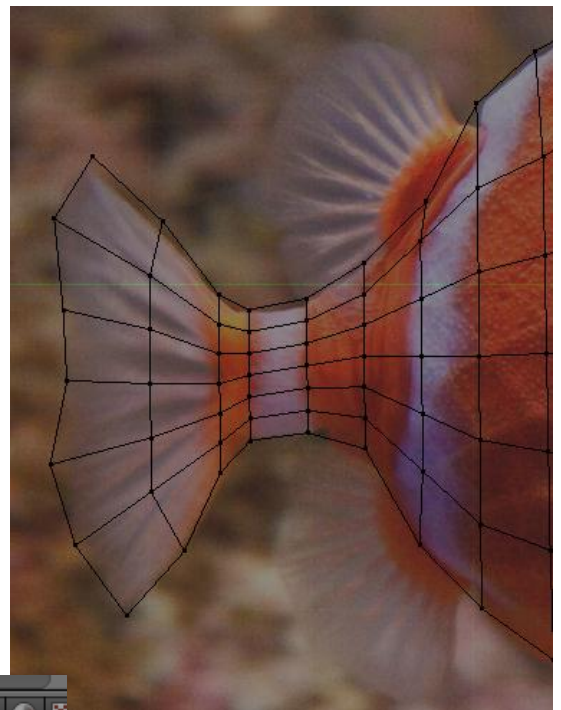


Select the verts shown in the image.

Grab and drag them to the on the X axis so they join to the left side of the tail.



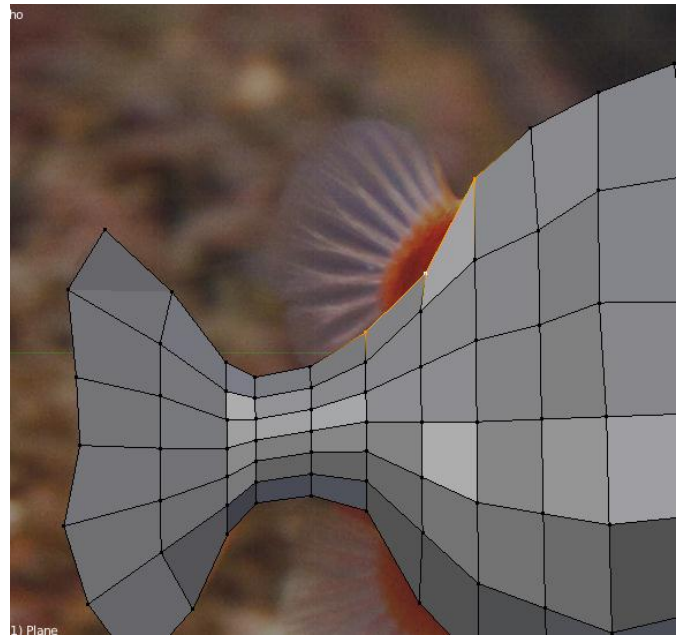
Switch to side view and loop cut the tail down the middle. Move the verts around so they make a better tail shape.



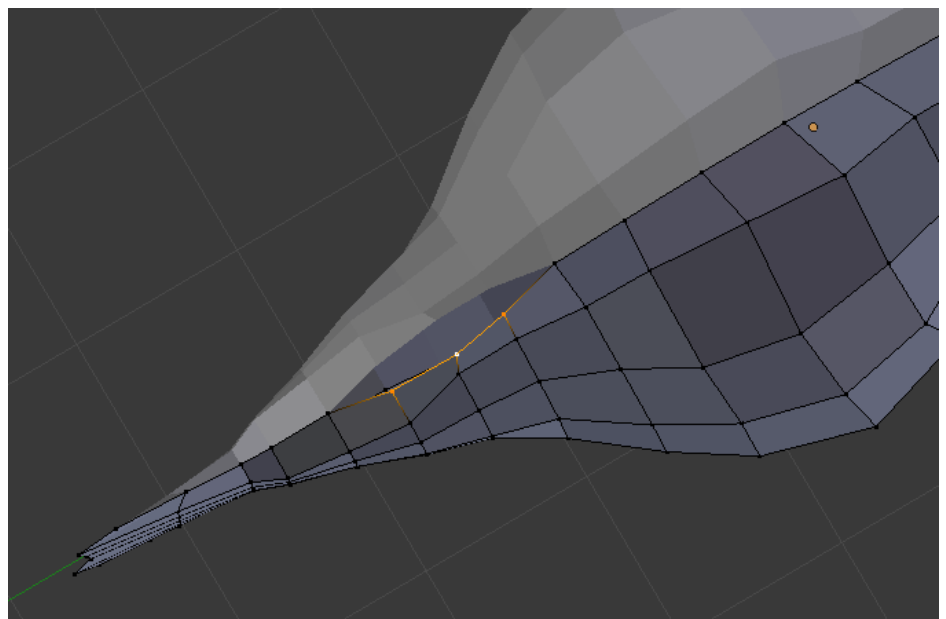
In the modifier menu click **OFF** clipping.



Select the three verts or the top fin.



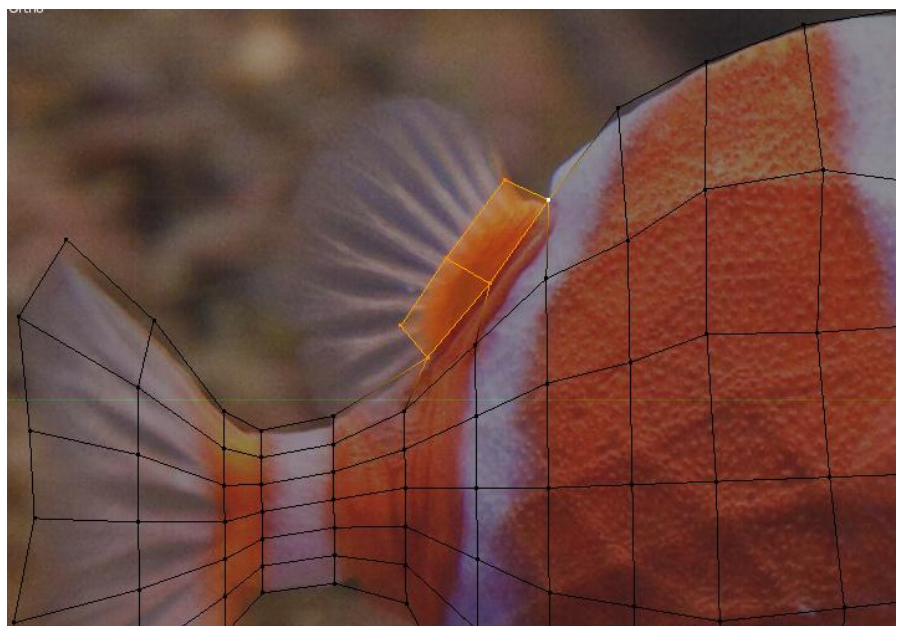
Move them out on the X axis so they make a little gap.



Switch to side view (Numpad 3).

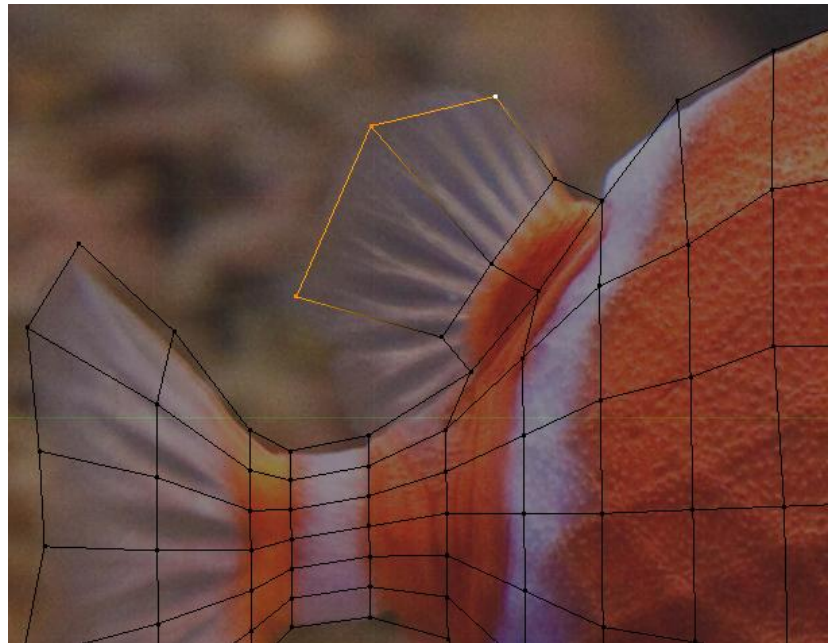
Then extrude them up.

Scale them in and move them around so they look like the image.



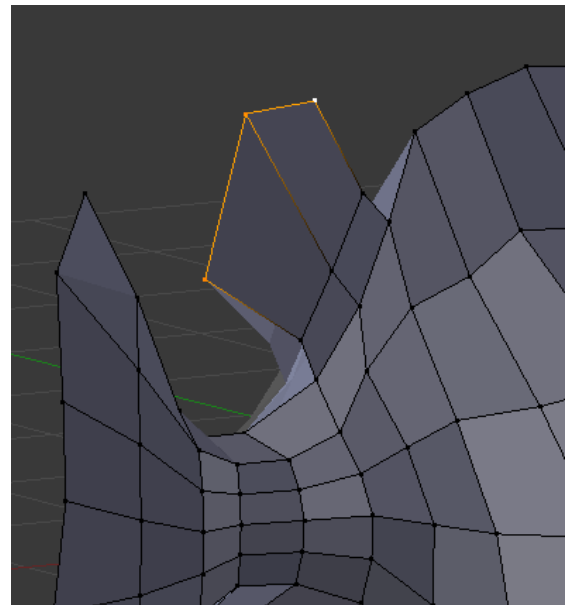
Extrude the verts out again to form the top of the fin.

Move them around so they look like the image.

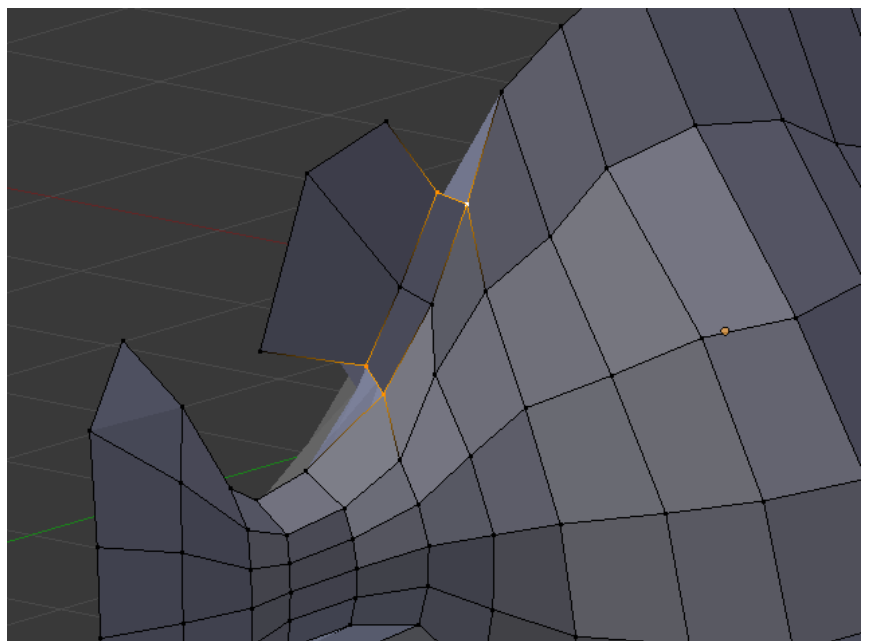


Turn **ON** Clipping (modifier menu).

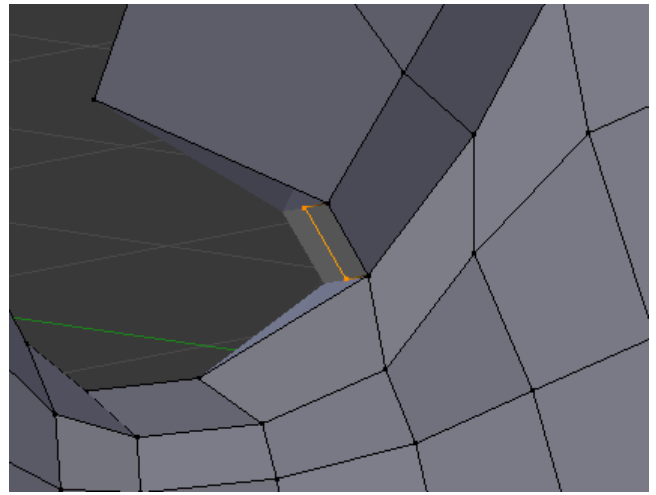
Move the top verts together on the x axis, so they meet with the other ones on the other side.



Select the four verts shown.



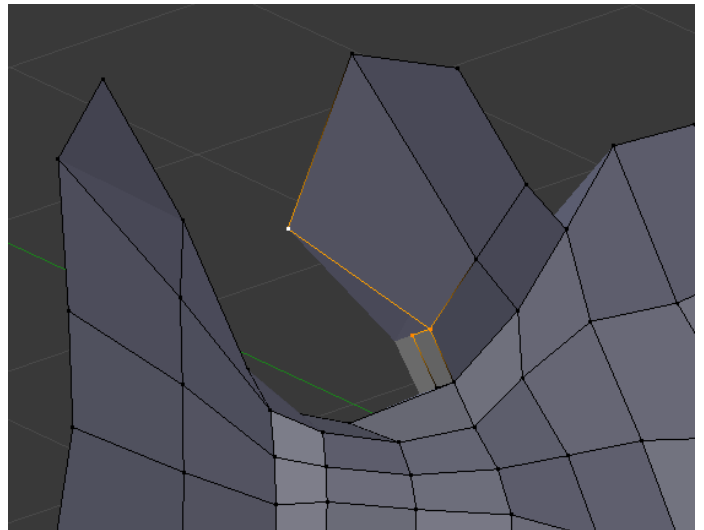
Extrude the verts towards the middle.



Select the verts shown and press F.

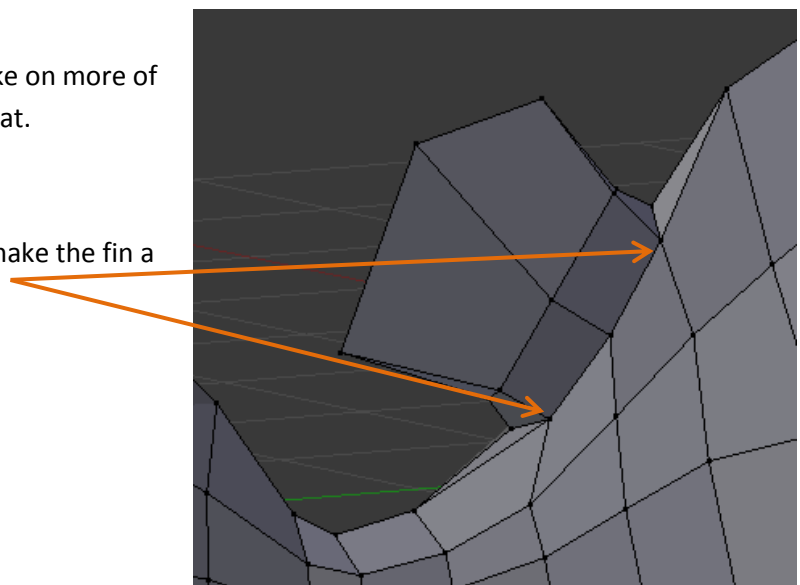
This fills in the empty space.

Continue around the fin and fill in all empty gaps.



Move the fin verts around so they take on more of a 3D look, and they are not so boxy-flat.

These verts have been pushed in to make the fin a more realistic shape.

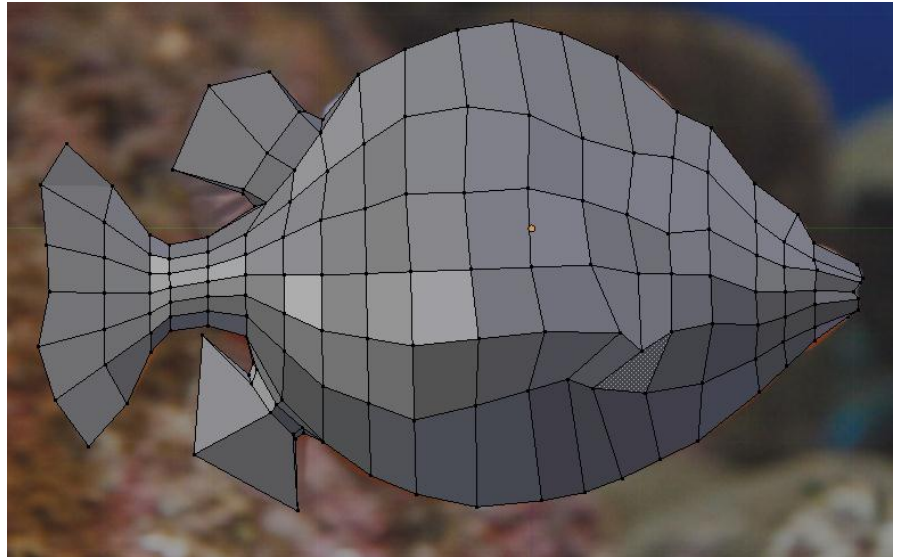


It's up to you to create the fin on the tummy.

Remember to turn Clipping off first.

Save.

The fish so far.

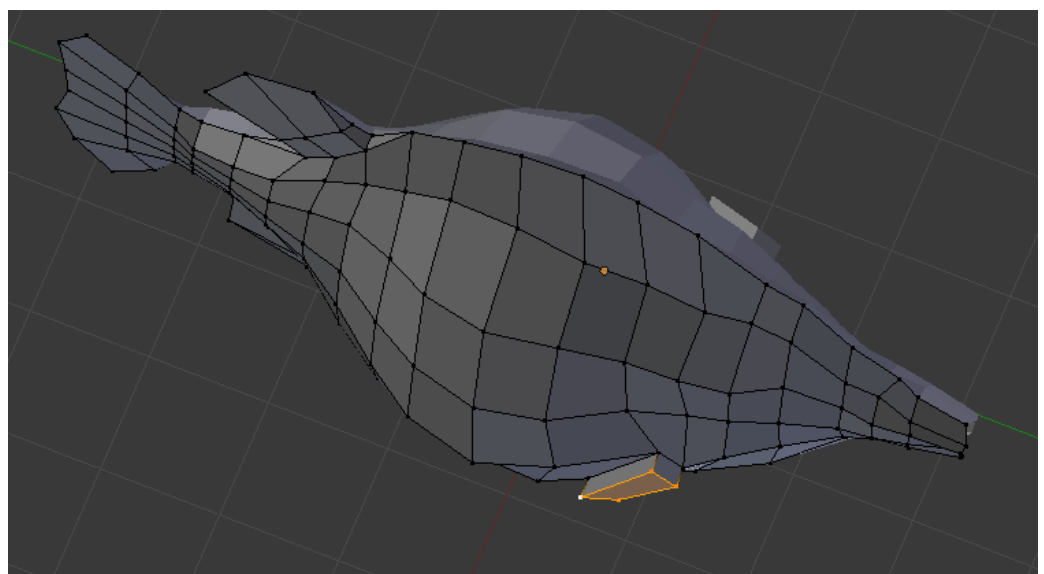


Now for the arm fin.

Select the verts as shown.



Extrude them out.

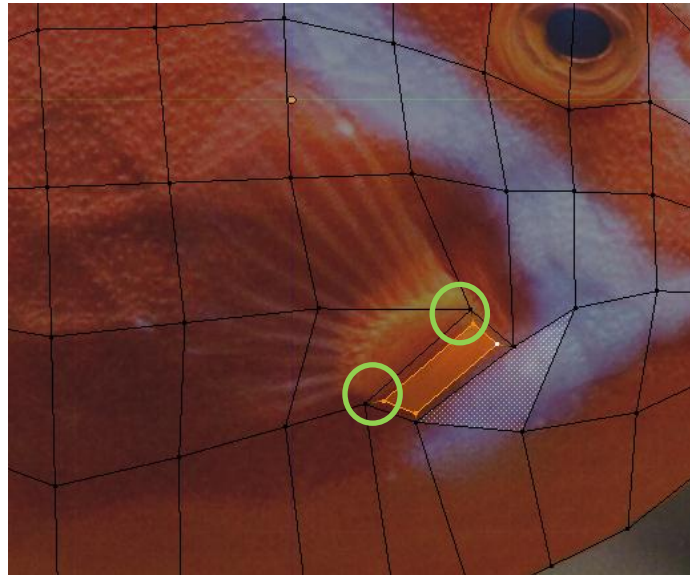


Scale it in.

Deselect (A).

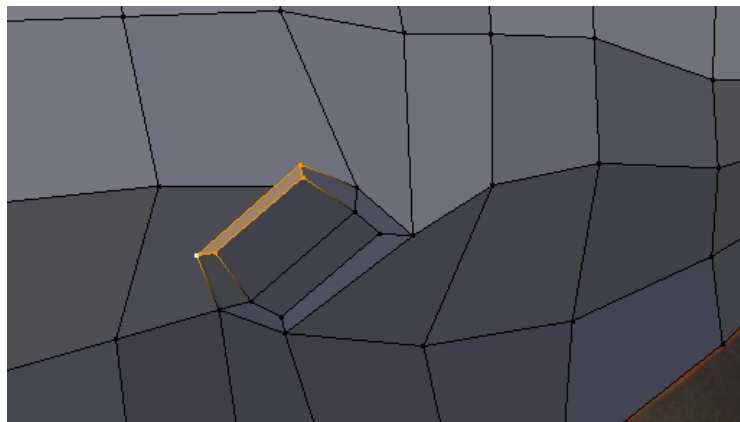
Select the verts circled in green.

Extrude them upwards, so you make the fin base.



Change to solid mode (Z) to check what it looks like.

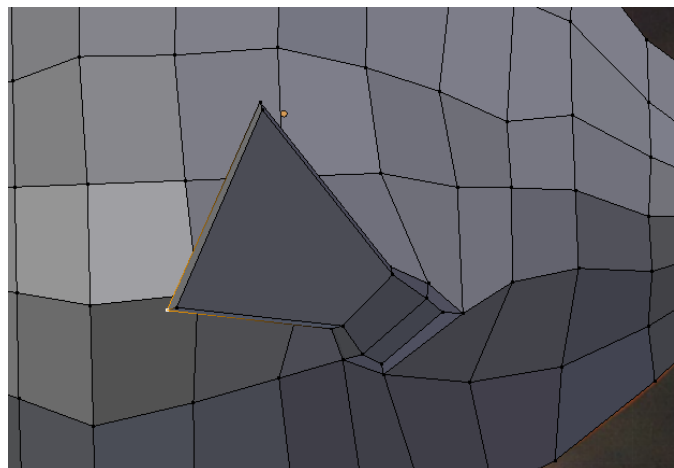
Fix the verts so the fin base is not too pointy.



Press Z, change to wireframe.

Extrude the fin out.

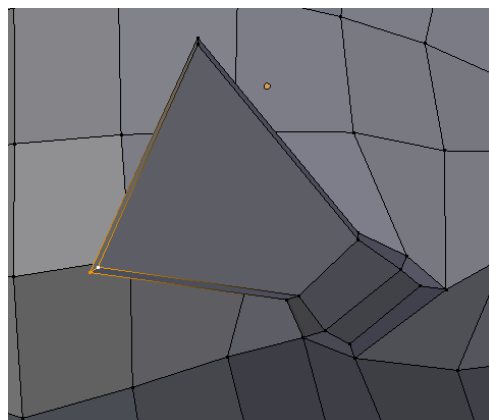
Change to solid mode.



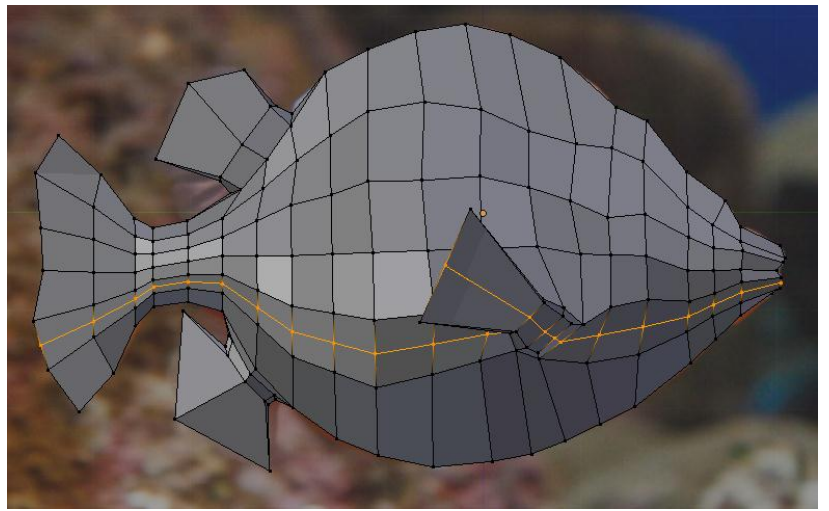
Select the two bottom verts of the fin.

Press Alt+M, select **To Center**.

Repeat for the two top fin verts.

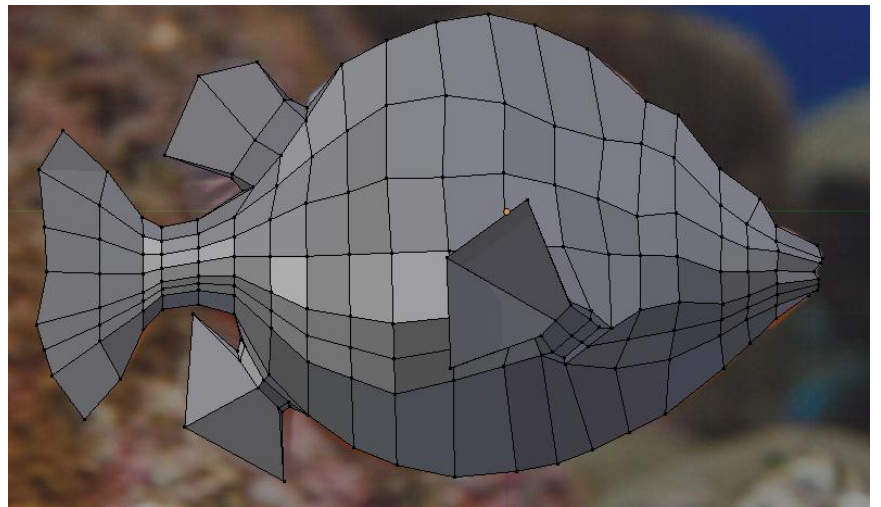


Loop cut through the middle of the fin.



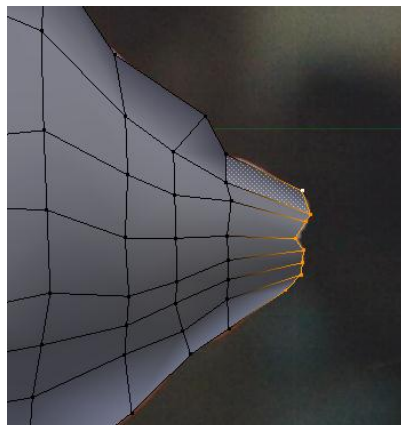
Move the fin verts like in the image.

Turn Clipping **ON**.

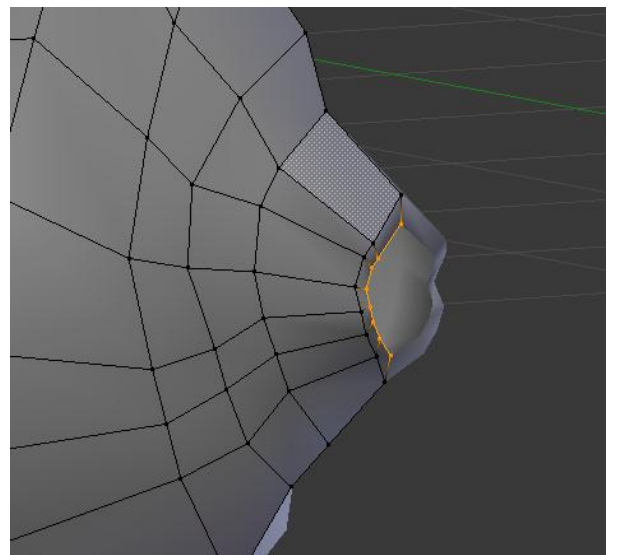


Fixing the mouth

Select the mouth.



Extrude the verts in. Scale them in a little.

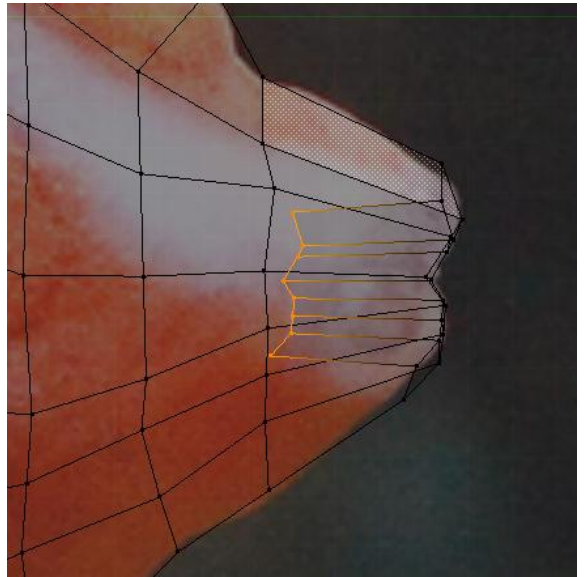


Change to side view.

Extrude them in.

Press S Y 0 (zero) Enter. This will line them straight.

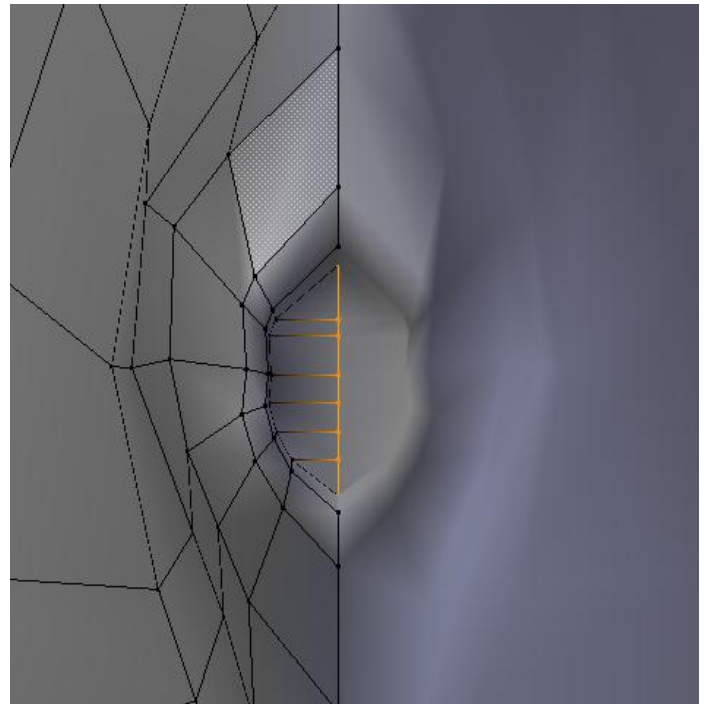
Press Ctrl+ Numpad 3 to see the front of the fish.



Extrude them in so they all meet in the middle.

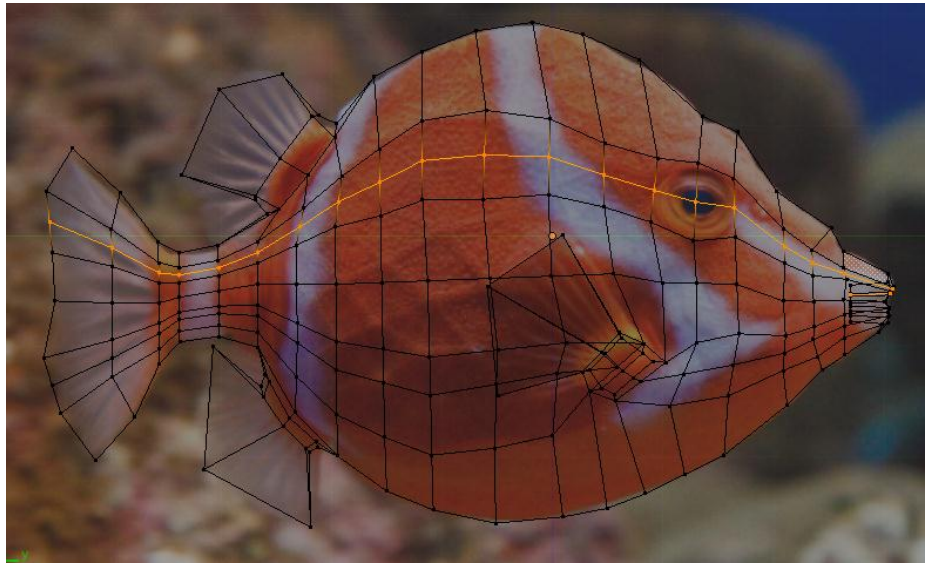
Deselect everything.

Save.



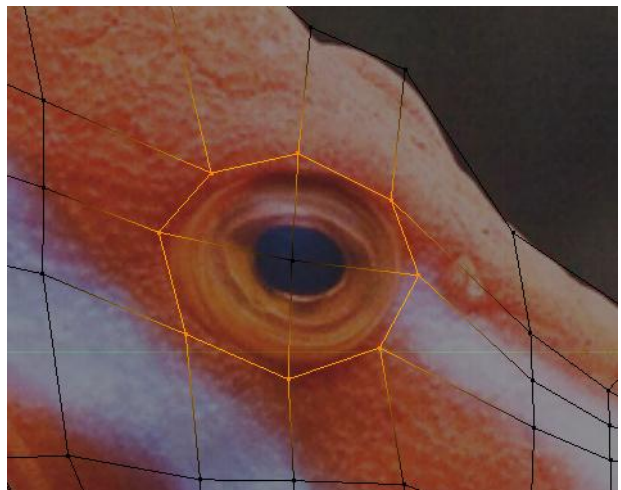
Now for the eye

Loop cut across the eye.



Move the verts around so they sit nicely around the eye.

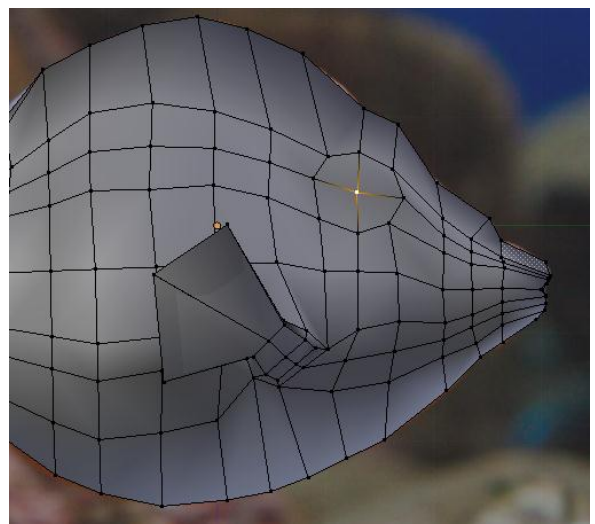
Select the verts around the eye, like in the image.



Press SX0(zero).

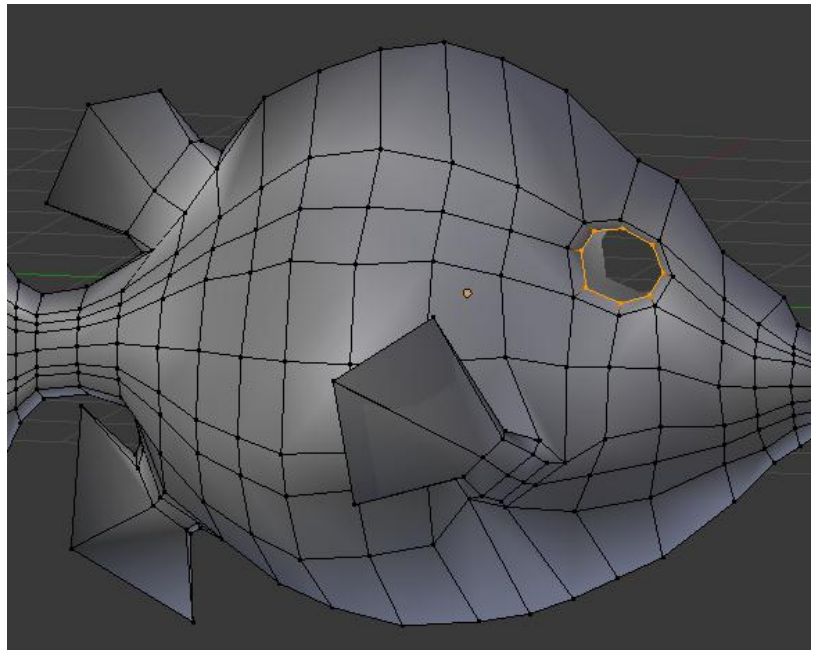
This will straighten them up.

Select the centre vert (shown in image) and delete it.



Select the outer eye verts, and
extrude them in on the X axis.

Scale a little them too.



Extrude inwards a second time.

Extrude inwards a third time, then press Alt+M,
then select **To center**.

Save.

And you're done!

