



3D & MOTION GRAPHICS > BLENDER

Modeling, UVmapping And Texturing A Low Poly T-Rex In Blender: Part 1

by [Karan Shah](#) 7 Jan 2013

Difficulty: Beginner Length: Medium Languages: English ▾

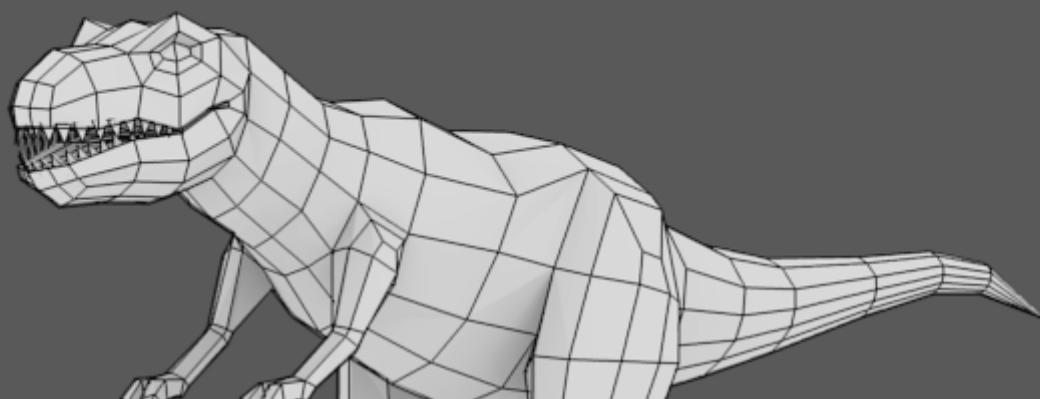
Blender

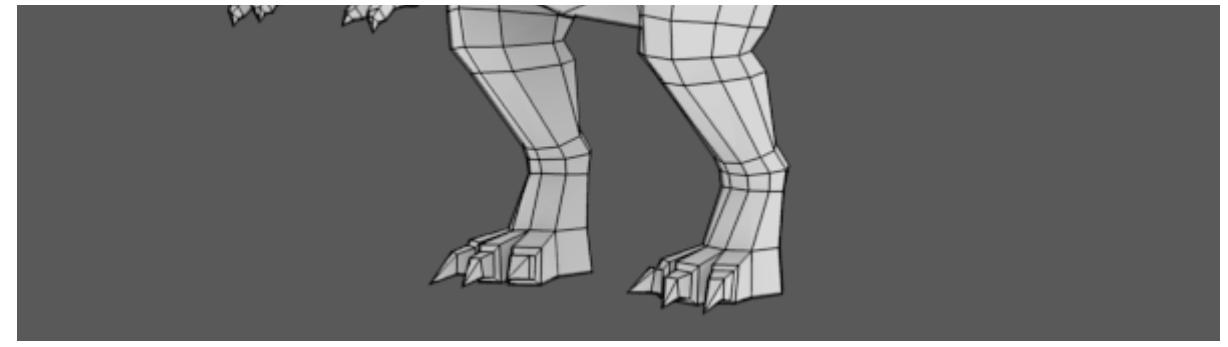
3D



This post is part of a series called [Low Poly T-Rex In Blender](#).

► [Modeling, UVmapping And Texturing A Low Poly T-Rex In Blender: Part 2](#)





In this tutorial you'll learn how to create an awesome low-poly dinosaur using Blender and Gimp. Artist Karan Shah will walk you through the entire modeling process step by step, and show you how to create an optimized model suitable for use in any game engine.

We'll follow things up later this week with part two, where we'll delve into Uvmapping and creating unique hand painted textures. Though this tutorial is made using Blender, the modeling workflow is universal in approach and can easily be applied to any other software. So get started after the jump!

Republished Tutorial

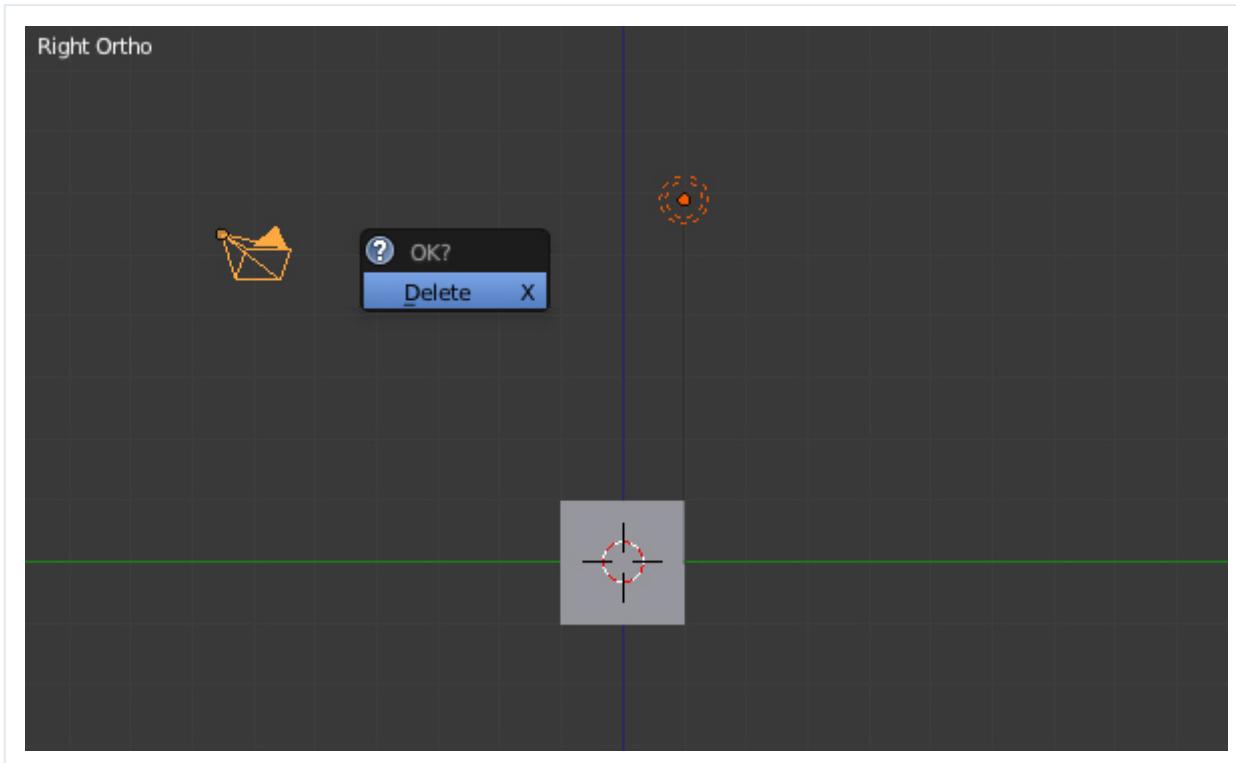
Every few weeks, we revisit some of our reader's favorite posts from throughout the history of the site. This tutorial was first published in January of 2012.

Additional Files/ Plugins:

- [T-Rex Blueprint](#)

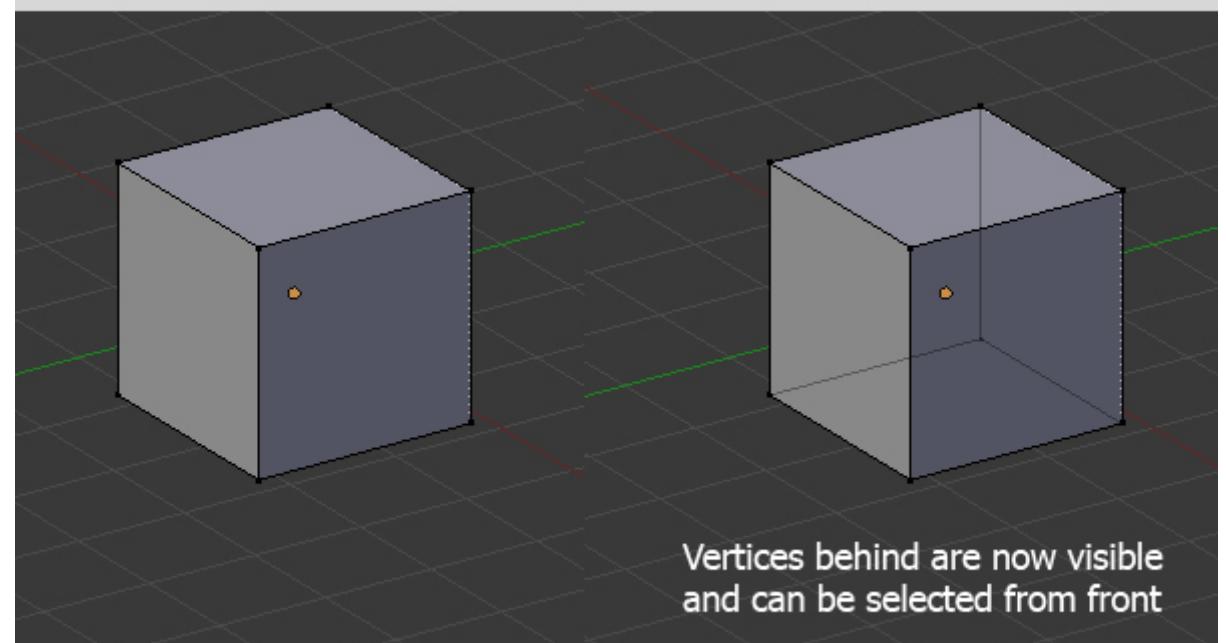
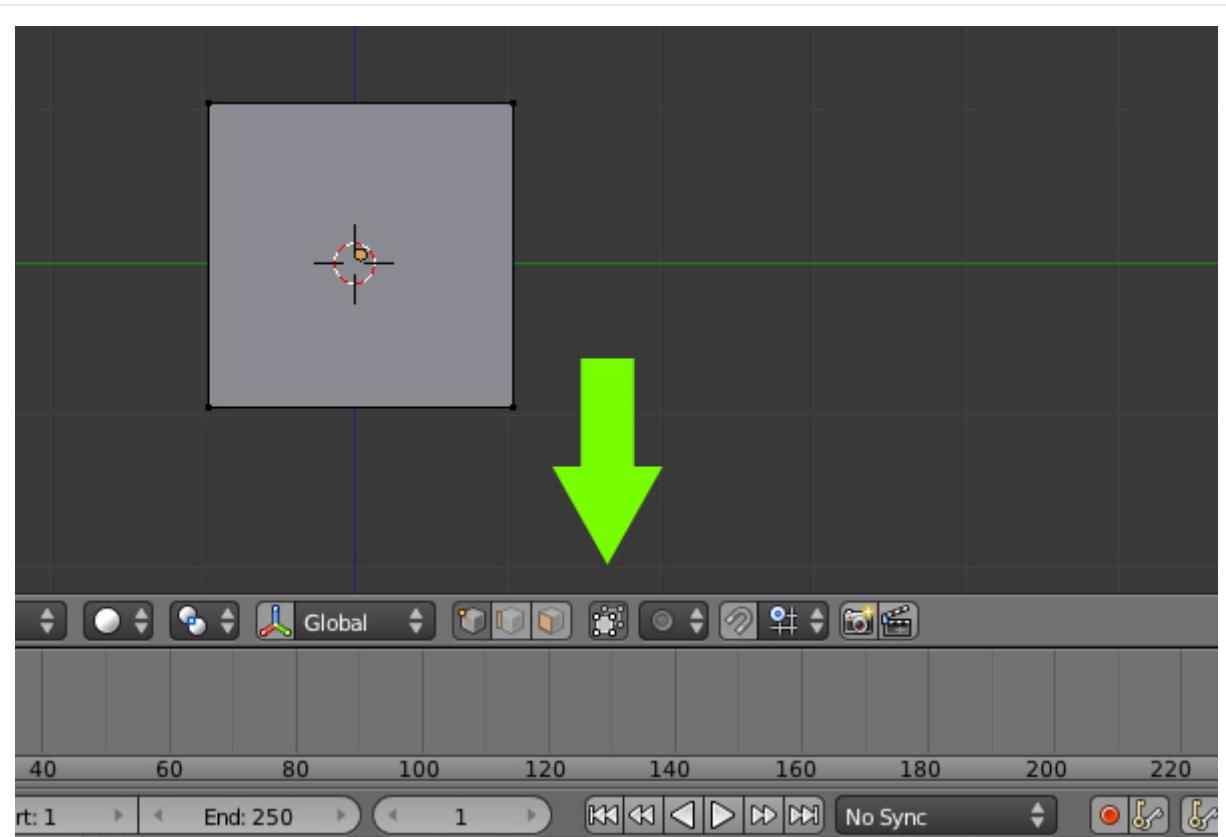
Step 1

In a new file, select the default camera and lamp, and press "Del" to delete them, leaving only the cube. Press "3" on the Numpad to get a Right Side View, and switch to "Ortho" view by pressing "5" key on the Numpad.



Step 2

Select the Cube by Right Clicking on it, and hit 'Tab' to enter into "Edit" mode. Also turn off "Visible Selection" so we can select the vertices hiding behind the front ones.

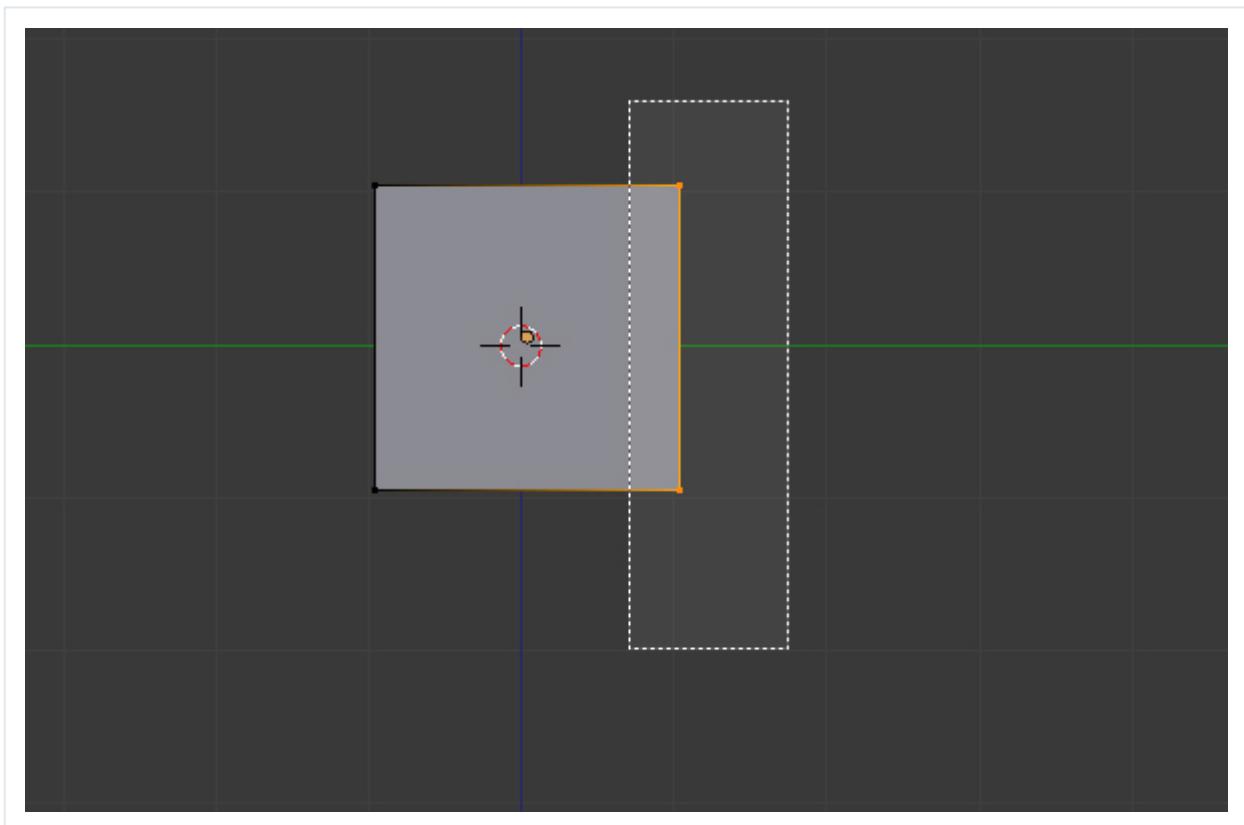




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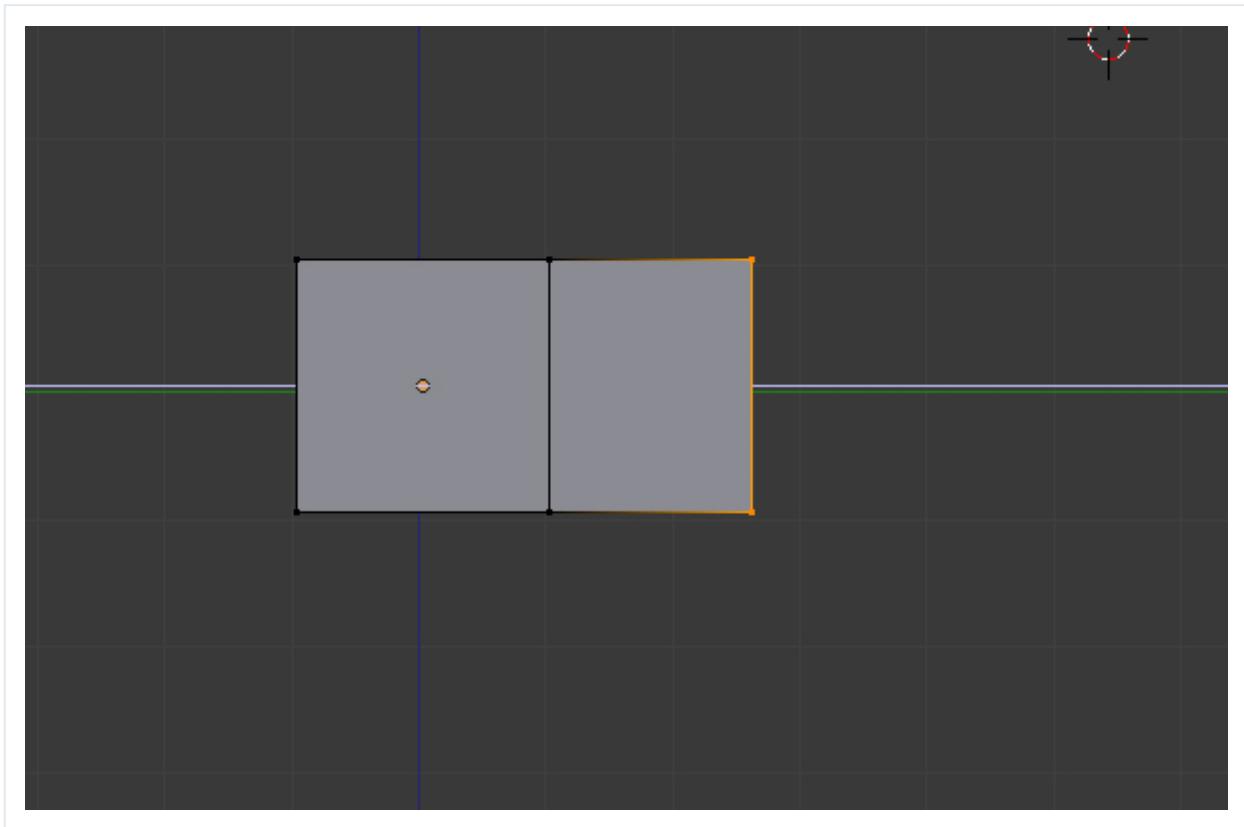
Step 3

In the right view press the "B" key and drag select the last 4 vertices. The ones behind will also get selected as we have turned off the "limit selection to visible" mode.



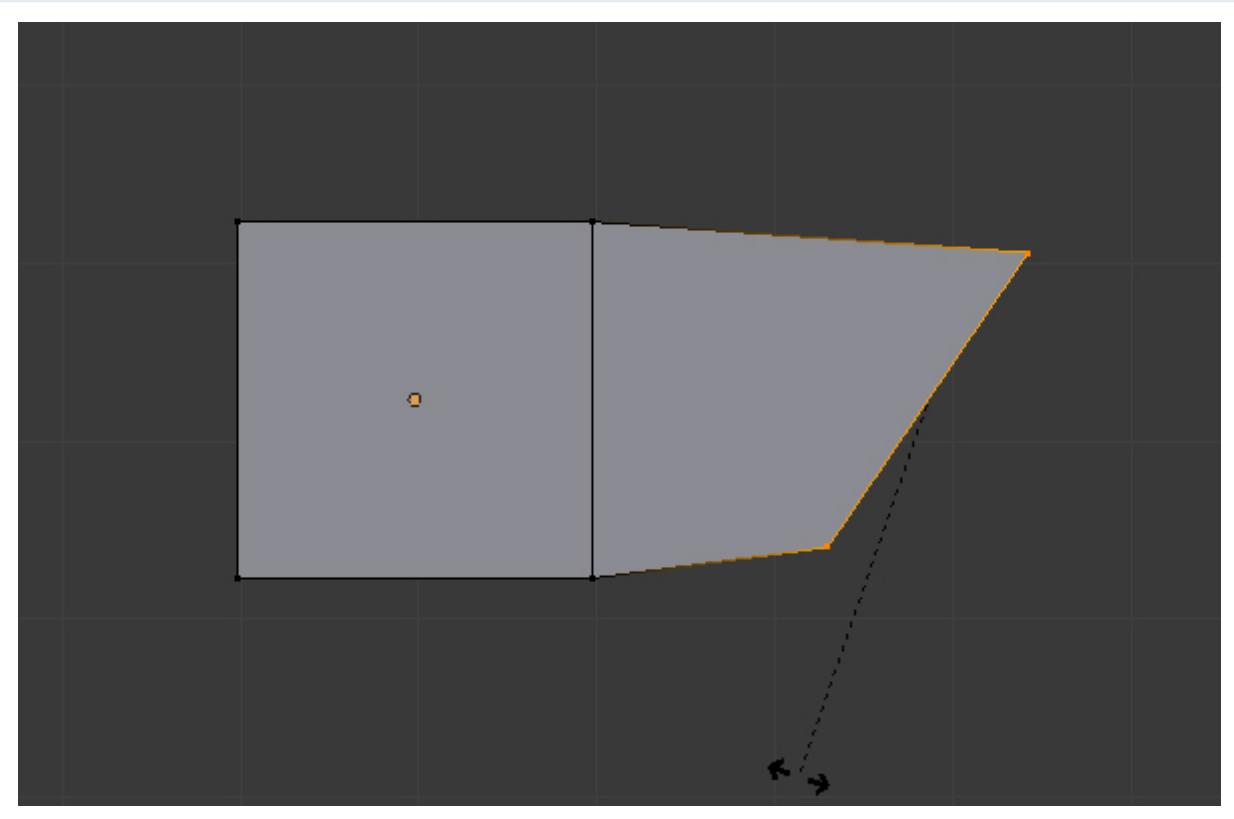
Step 4

Press "E" to Extrude, move your mouse right a little bit and Left Click to confirm.



Step 5

With the new vertices selected, Press "R" to Rotate, and Move the mouse to rotate them around 45 degrees, like in the image. Left click to confirm.

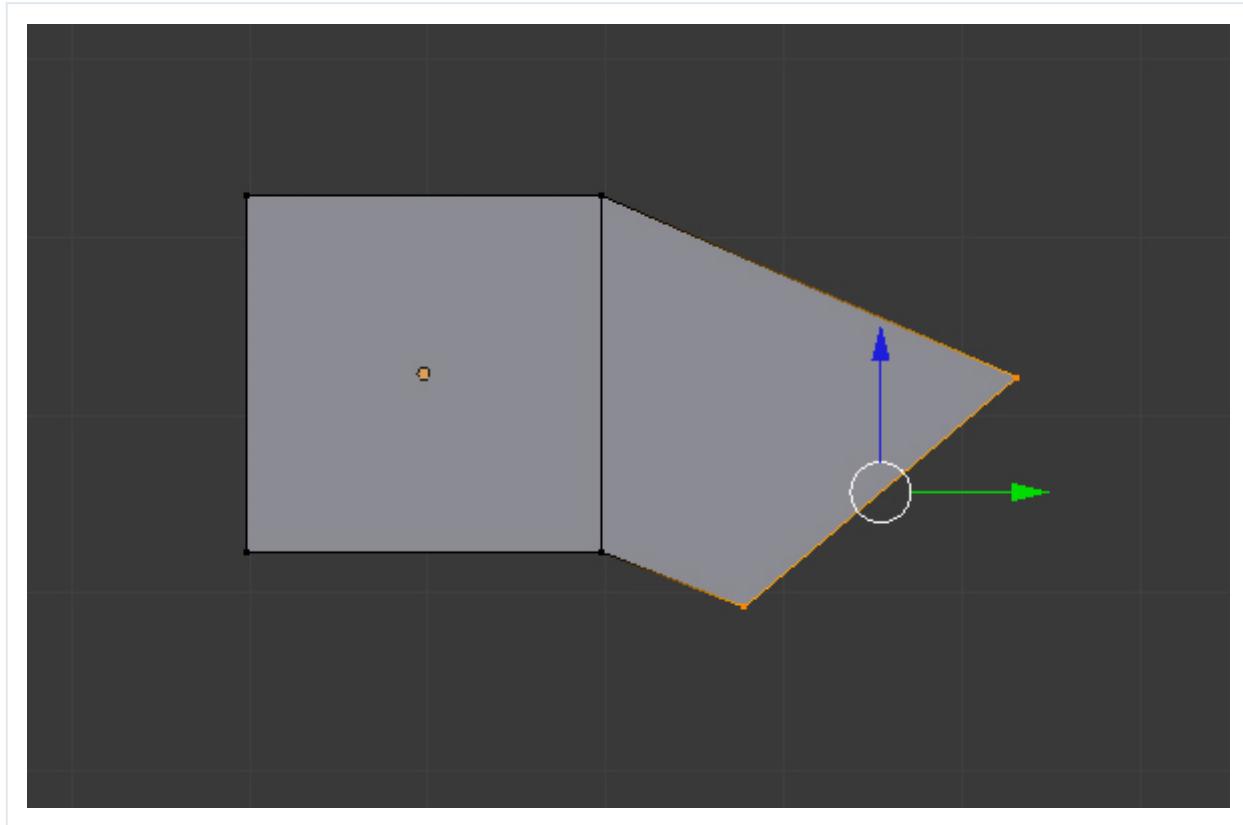


Advertisement

Step 6

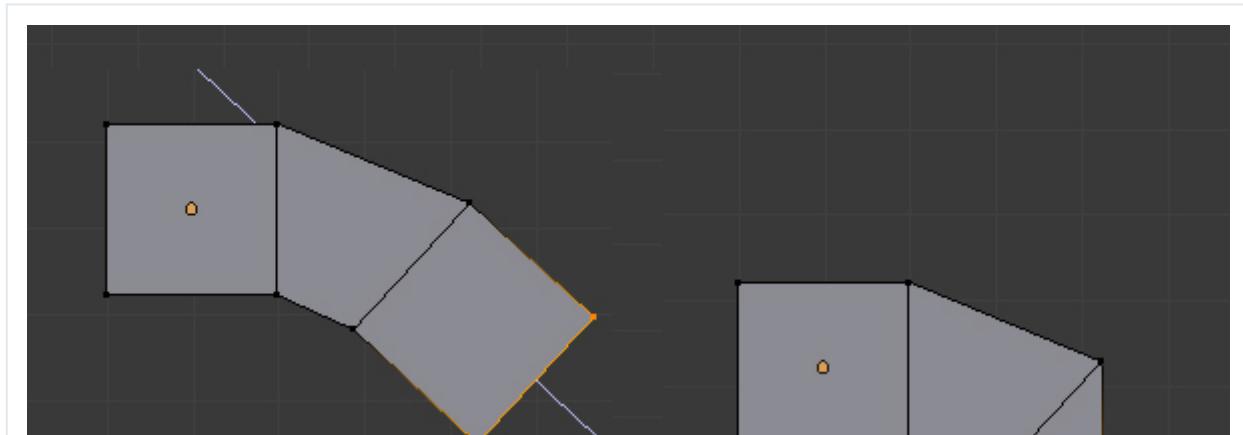
Dash them down a little bit. Press "G" to move them, and Move the

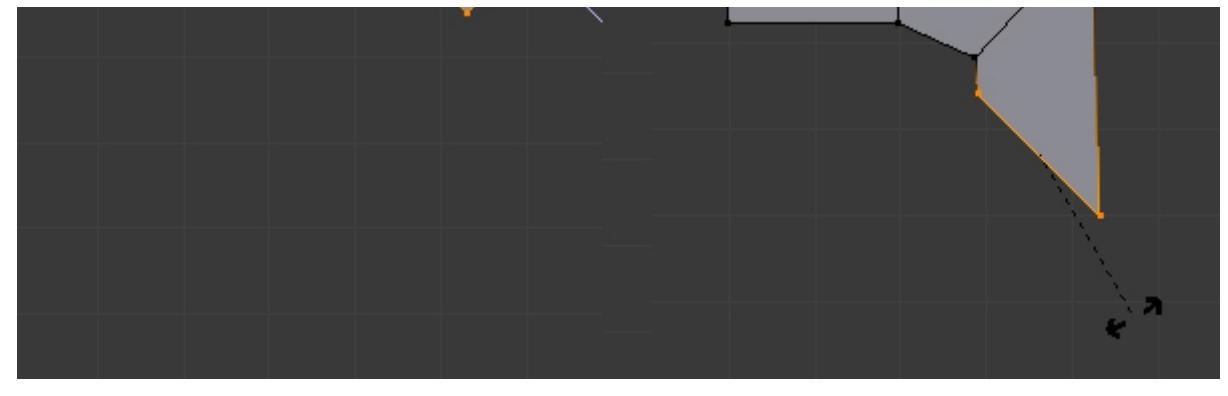
Push them down a little bit. Press G to move them, and move the mouse down and left click to confirm.



Step 7

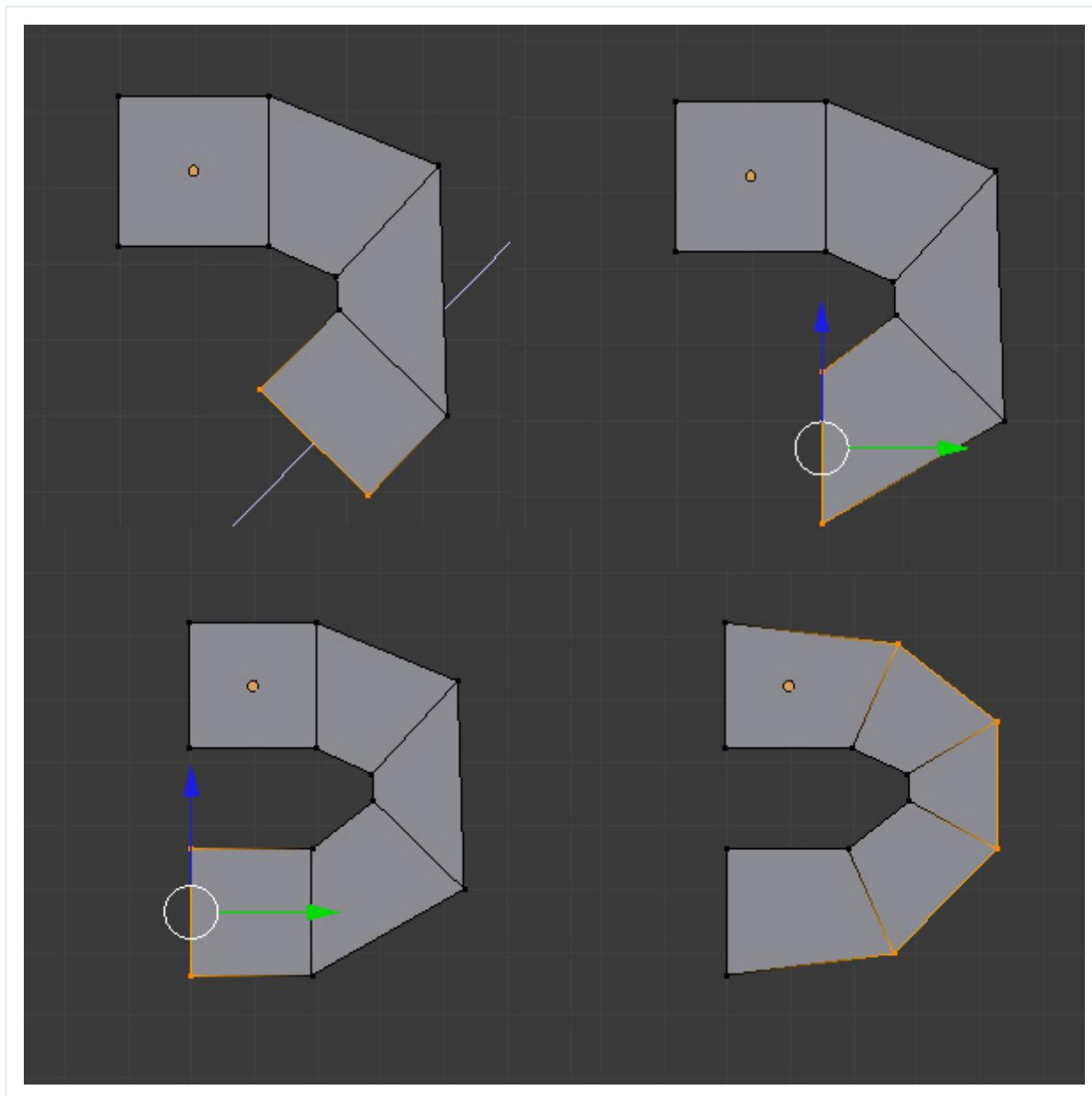
Now Extrude again, and then Rotate and Move the vertices as shown in the image.





Step 8

Extrude again to form a "C" shape. Then select and move the corner vertices to give it roundness.



Step 9

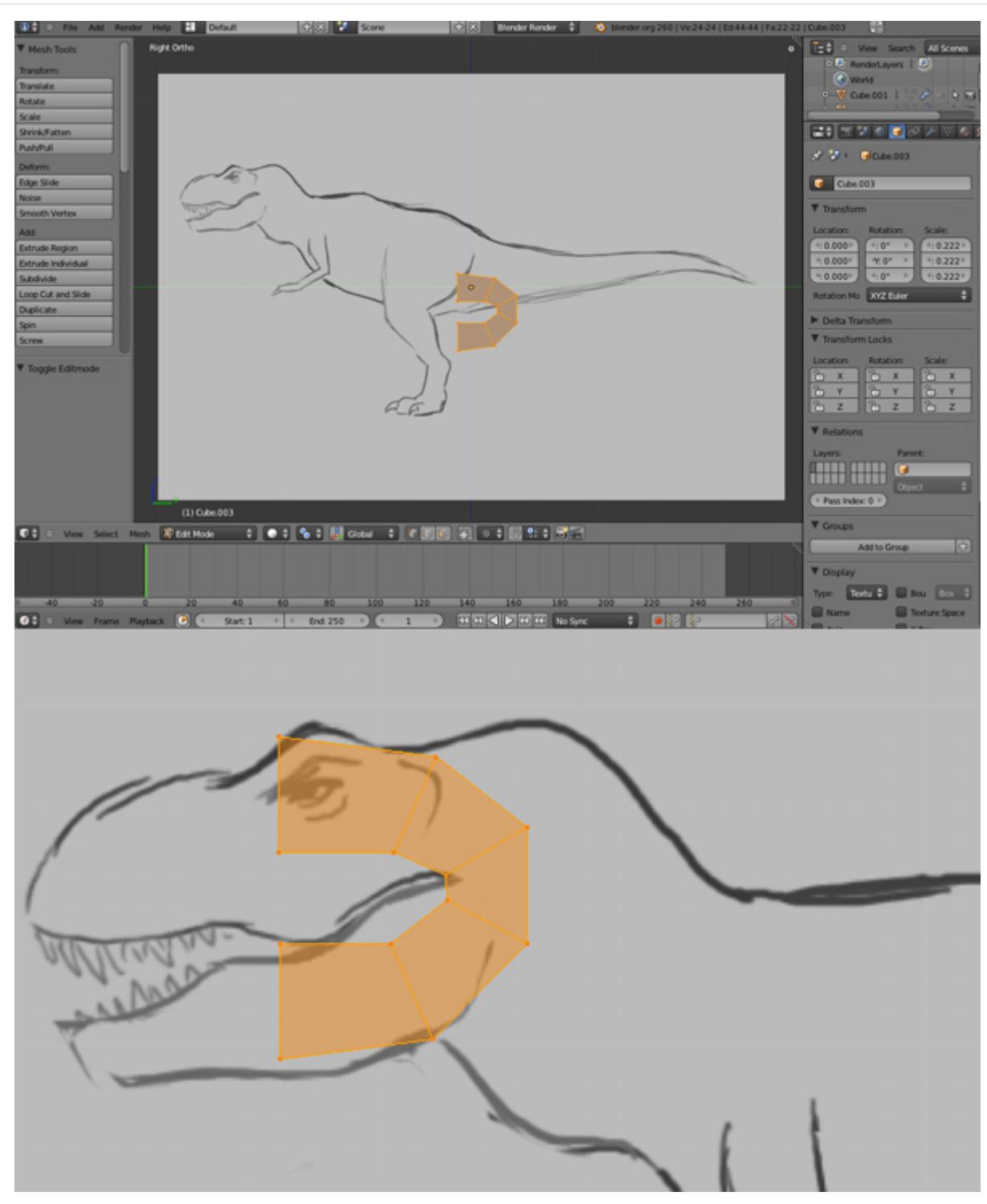
We can now add the background image for reference. With the mouse over the 3D view, Press "N" to bring out the properties panel. Click on the checkbox of the "Background images" panel and the open the reference image. Adjust the transparency and scale to your comfort.



Step 8 Image

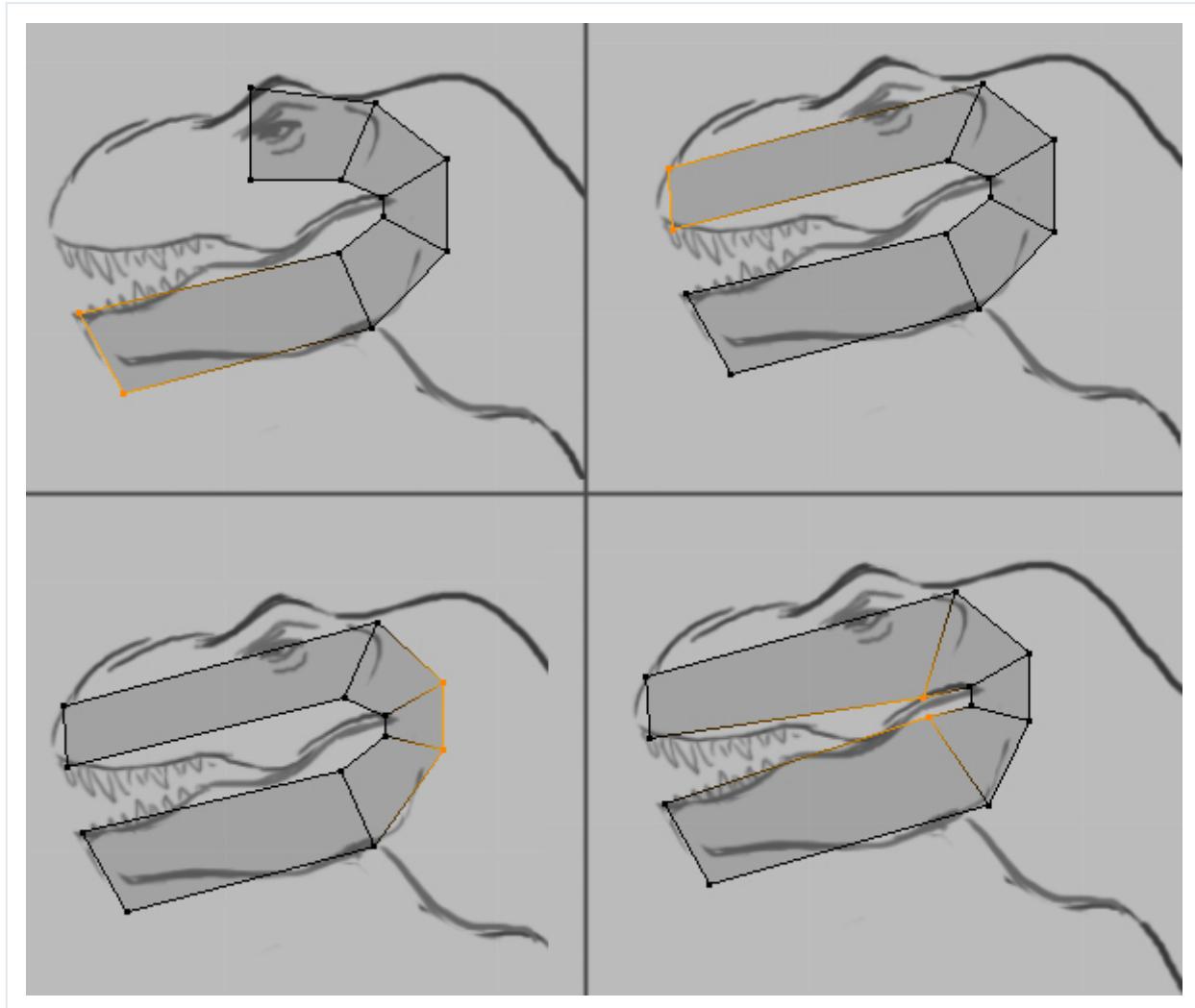
Step 10

Press "N" again to hide the properties panel (you can also press "T" to hide the Toolbars panel.) While in "Edit" mode, select all the vertices and move them over the head area. Press "Z" to toggle the view mode to wireframe, so that we can see the reference behind the object.



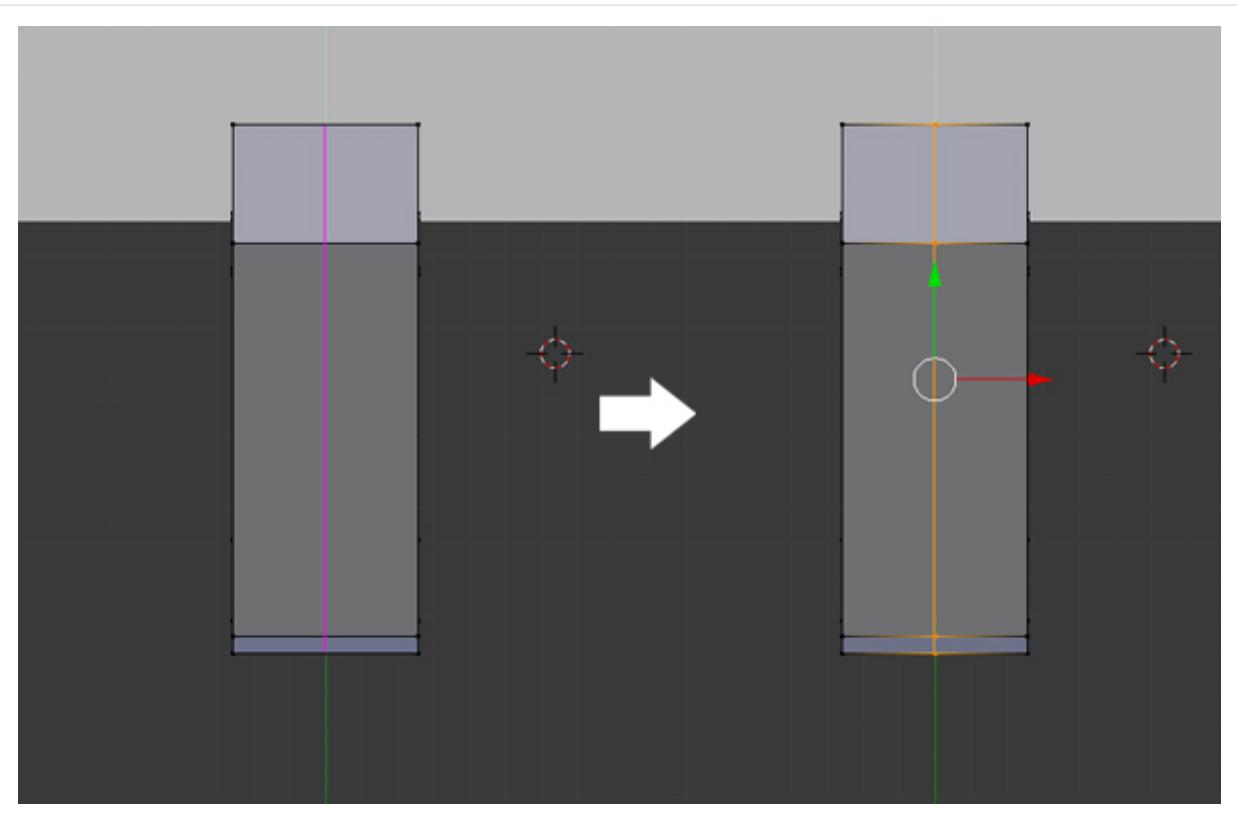
Step 11

In Edit mode, move the vertices to create the shape of the head (as shown.) And then Save the file by pressing "Ctrl+S" or "Ctrl+W".



Step 12

Press "7" on the Numpad to get into the Top view. Move your mouse near the center of the mesh and press "Ctrl+R" and Left Click to confirm. This will give us a center seam on the body.



Step 13

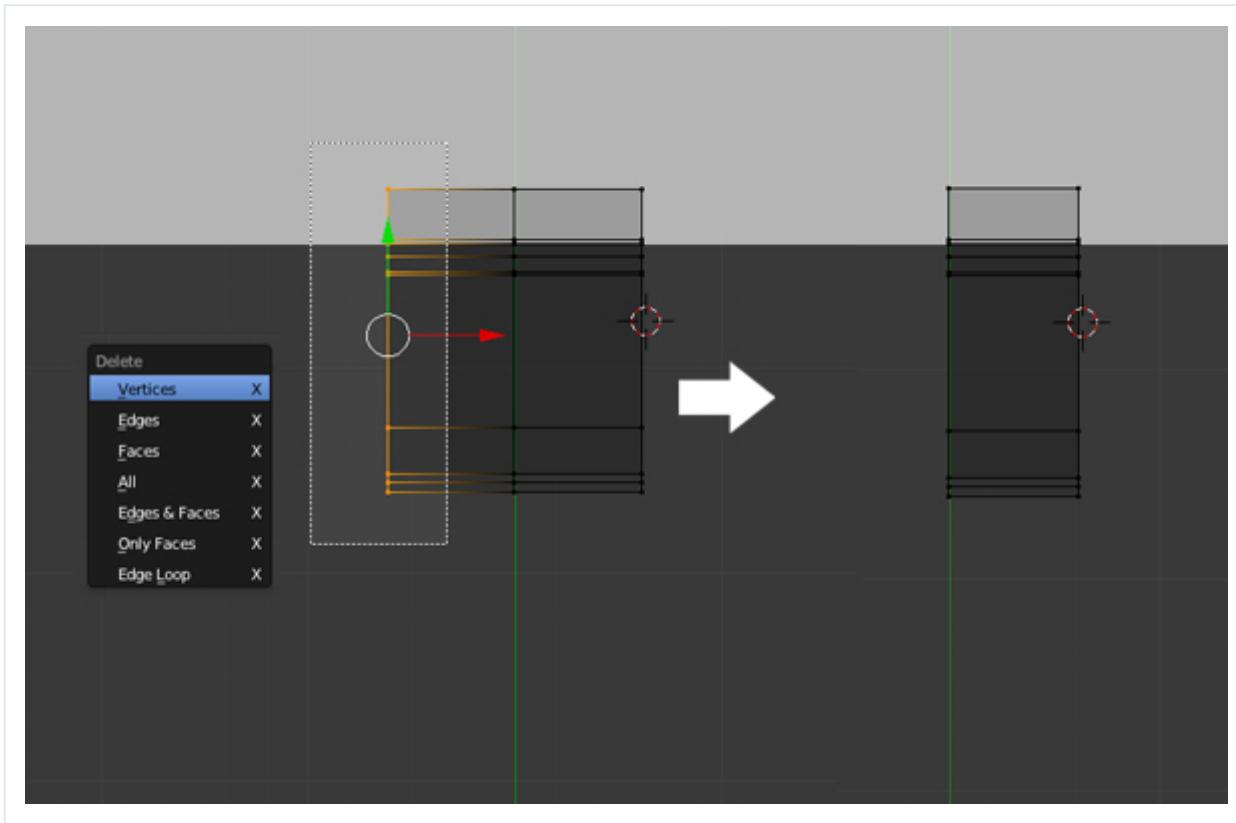
Select all the vertices by pressing "A" and then scale them along the X axis by pressing "S" and then the "X" key. Click with the Left mouse button to confirm.



Step 11 Image

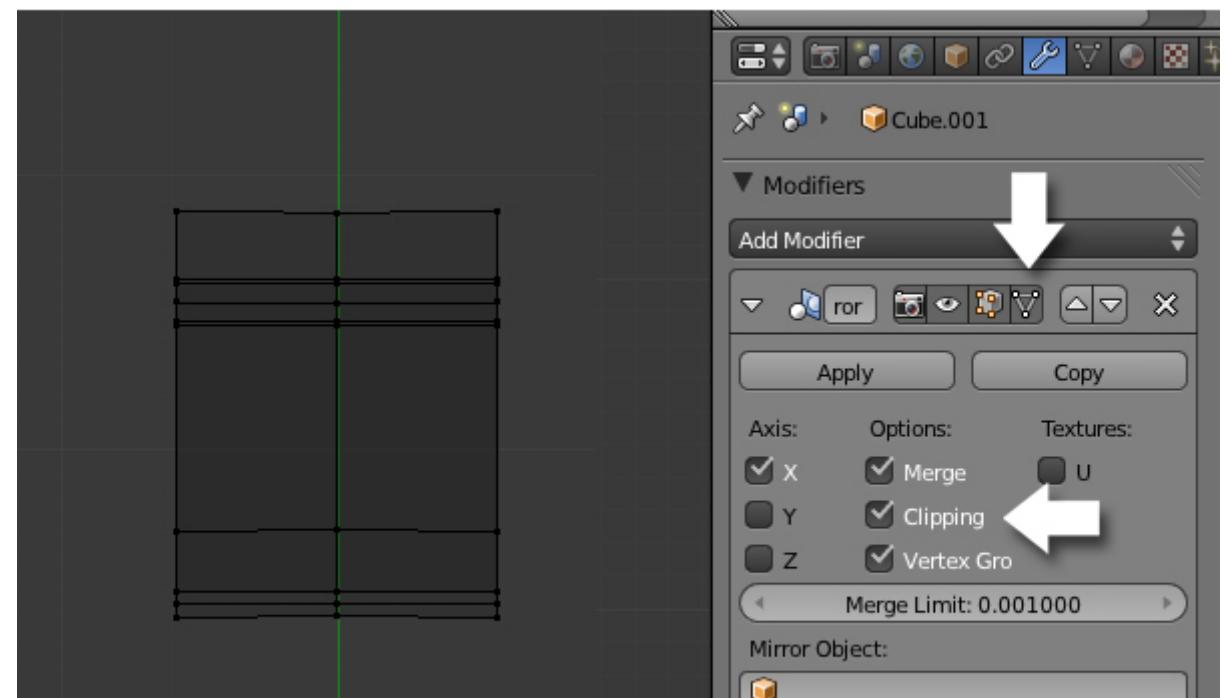
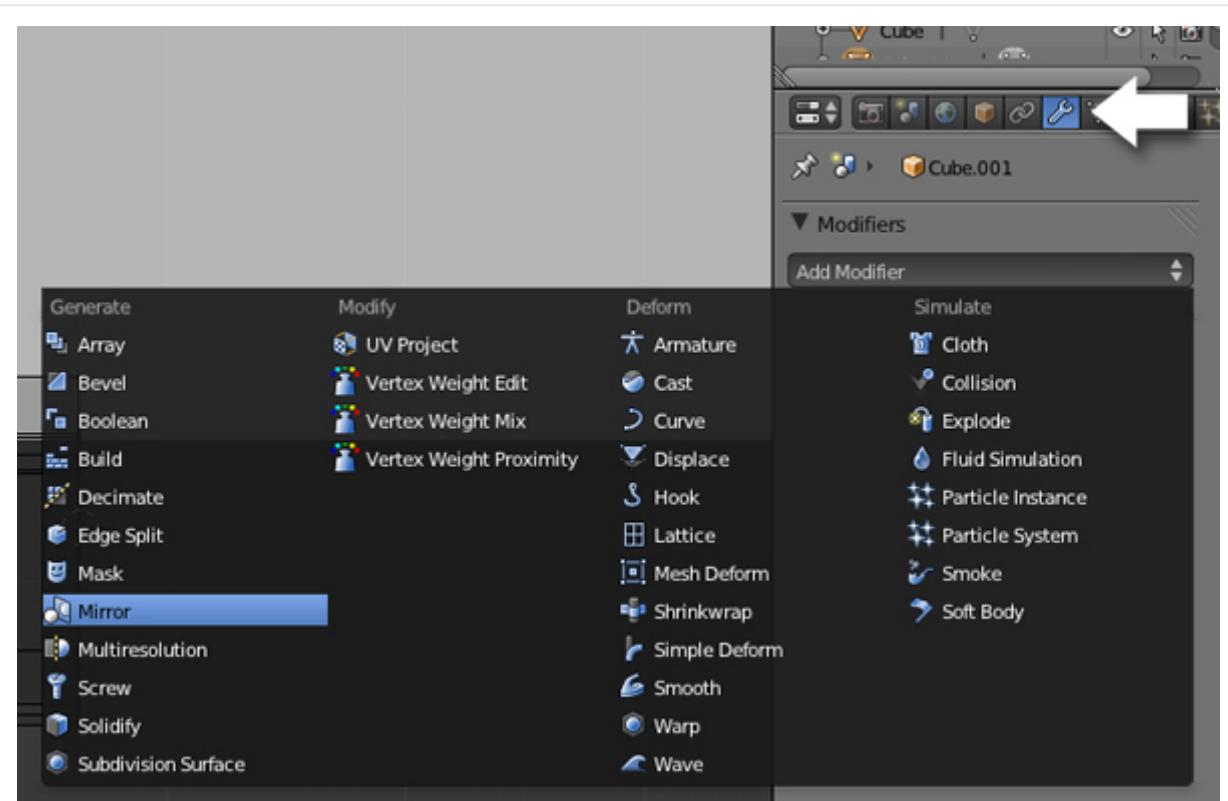
Step 14

Deselect all by pressing the "A" key. Now press "B" to drag select all the left vertices, and press 'del' to delete them.



Step 15

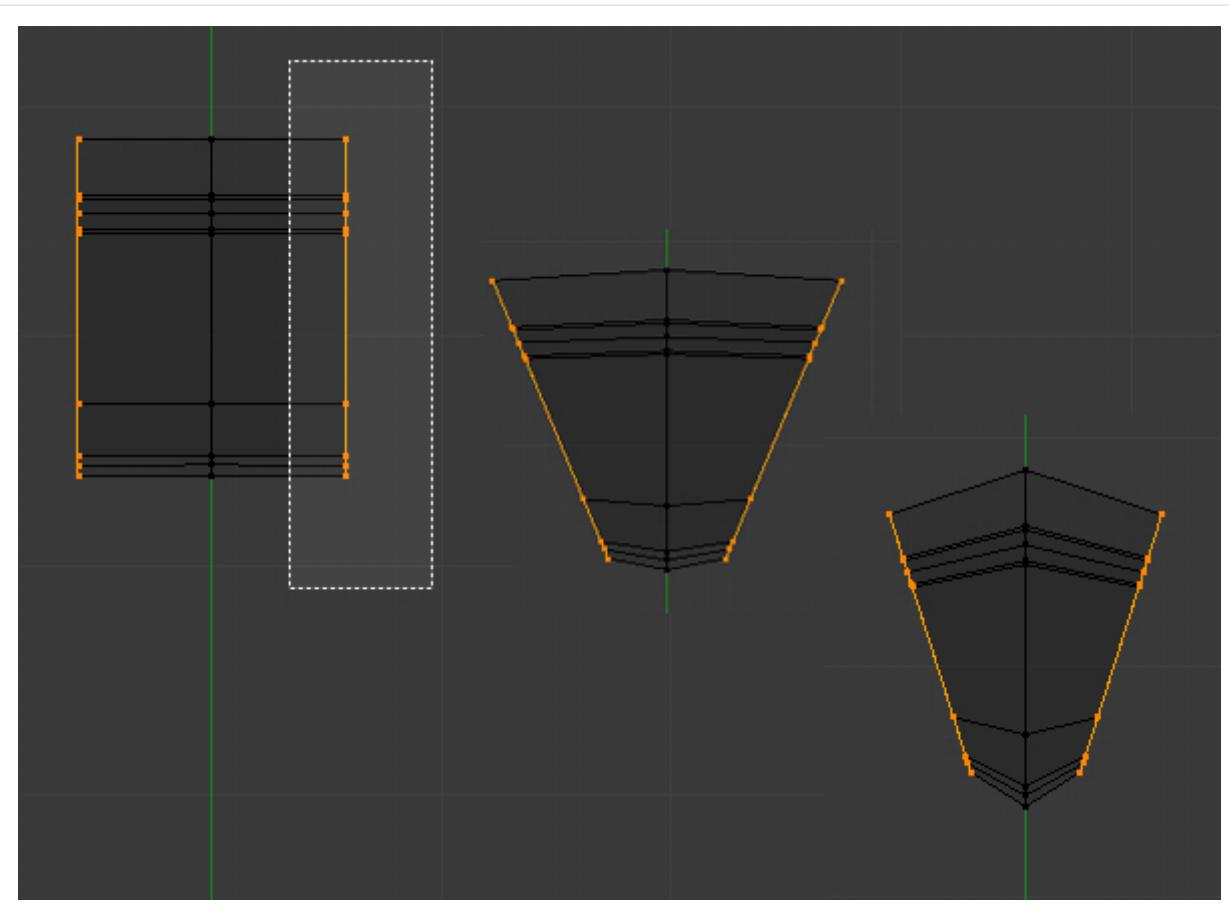
Click on the "Object Modifiers" Button in the property toolbar, and then add the "Mirror" Modifier. Turn on "Clipping" and "Editing Cage". Any editing done on one side will now automatically be mirrored to the other, so we don't have to model twice. Turning on clipping will keep the center loop of vertices intact.





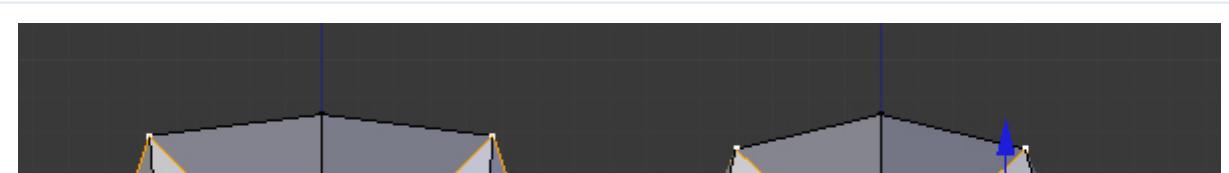
Step 16

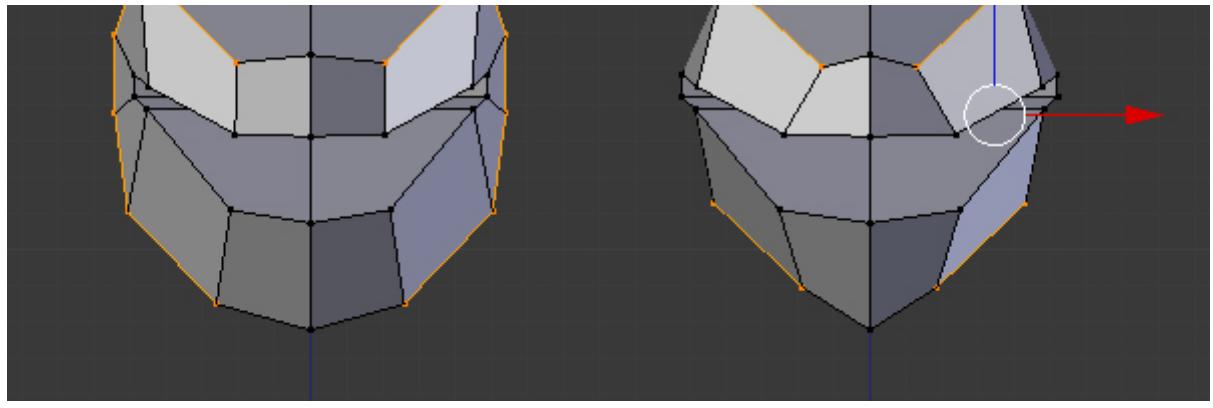
Select the side row of vertices, and then rotate and scale them down (as shown.)



Step 17

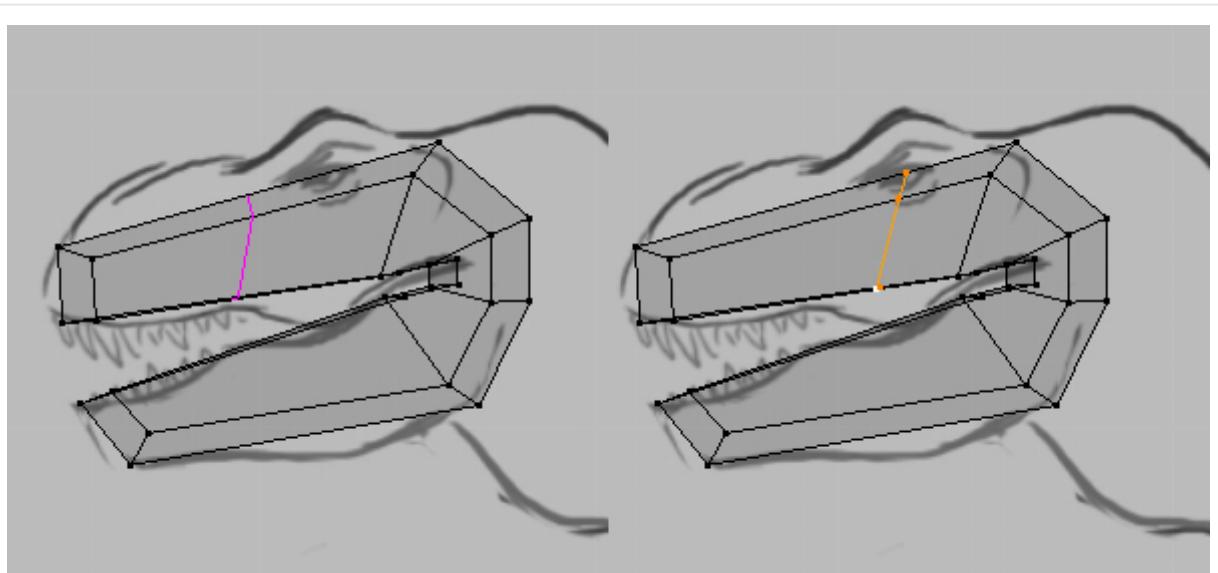
Press "1" on the Numpad to enter the Front view, and then adjust the top side row of vertices (you can select a loop of vertices with alt+Right click.) Push them inwards, you can also turn on/off wireframe mode with the "Z" key. You can also switch on the "selection to visible".





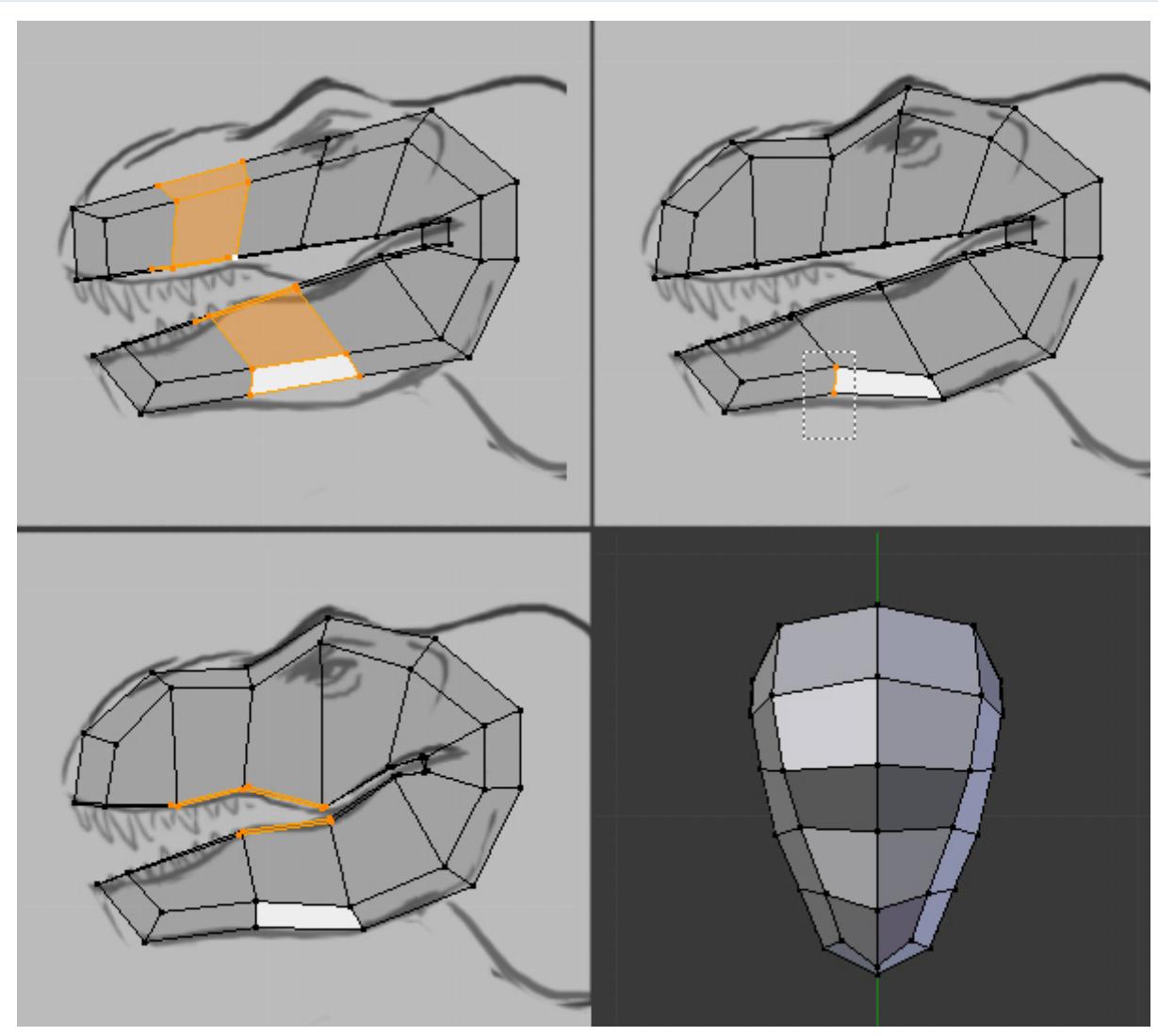
Step 18

Switch back to the Side view by pressing "3" of the Numpad. Move your mouse over the mesh and create an Edge loop over the eye, by pressing "Ctrl+R". Once the Magenta mark for the loop is in the desired place, left click to confirm and then adjust its place by moving the mouse. Left click again to confirm.



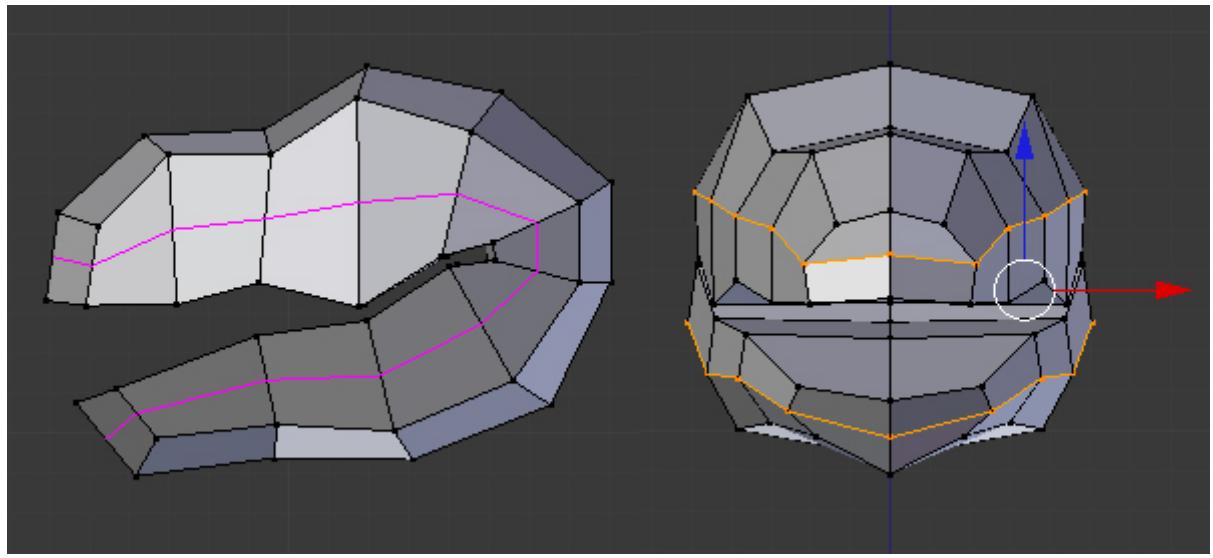
Step 19

Add more edge loops (vertically) and continue to shape the head by tweaking the vertices. Verify the shape by checking the model from all views.



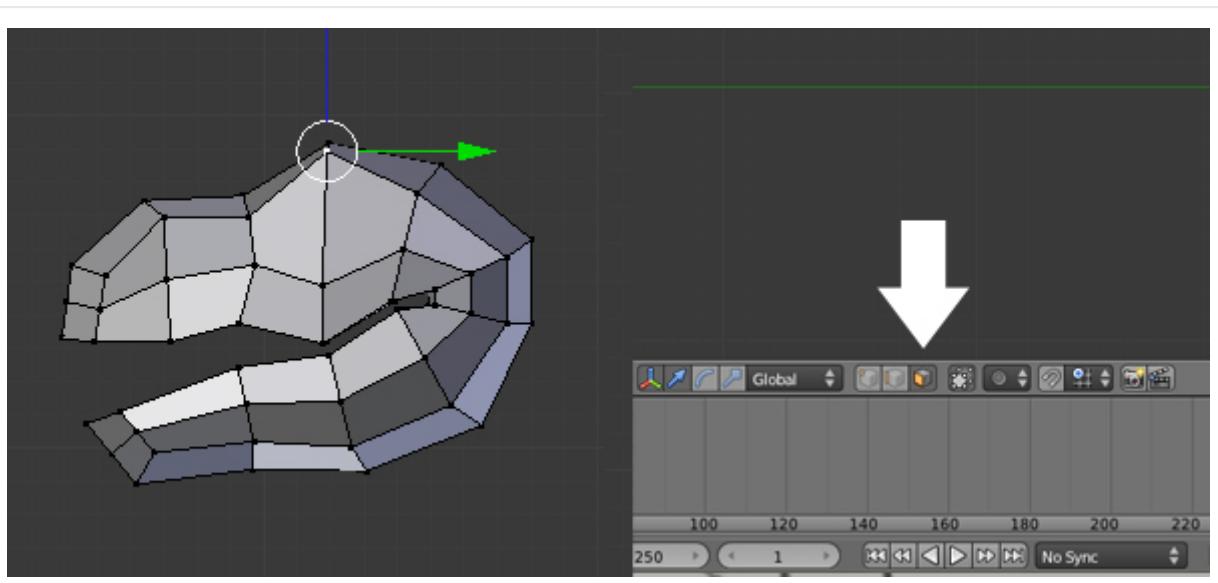
Step 20

Now in the Side view, Press "Ctrl+R" again to add one more edge loop (this time horizontally) and Left click to confirm. Adjust them and pull them out a bit.



Step 21

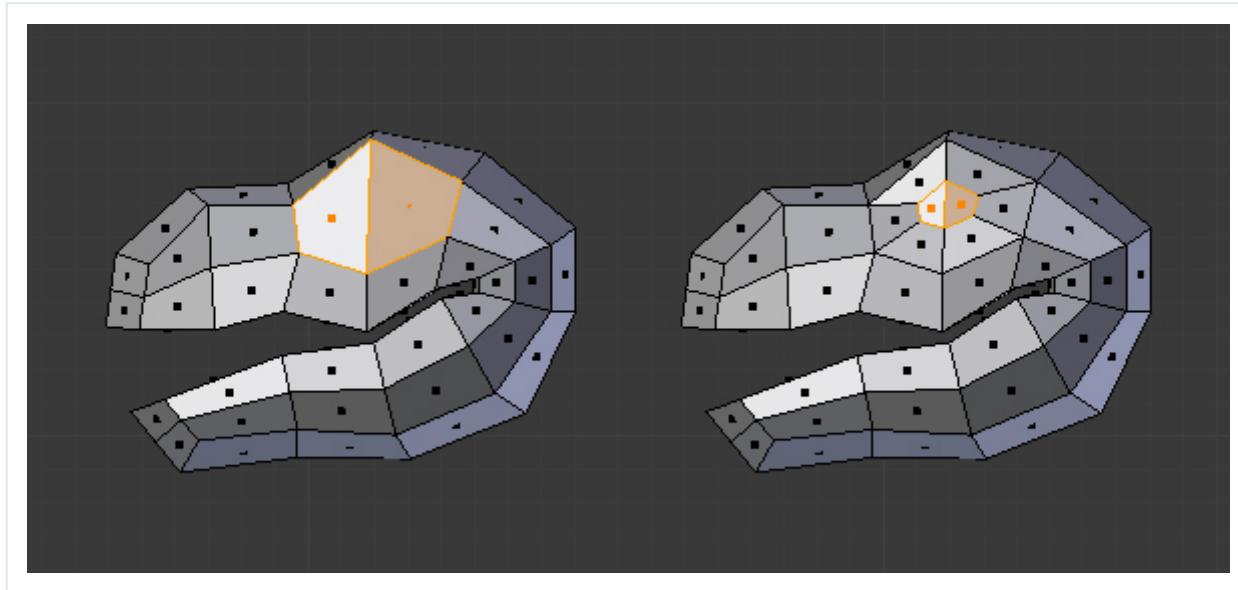
Select the vertices running across the eye and move them as shown in the image. And then Click on the "Face" select mode.



Step 22

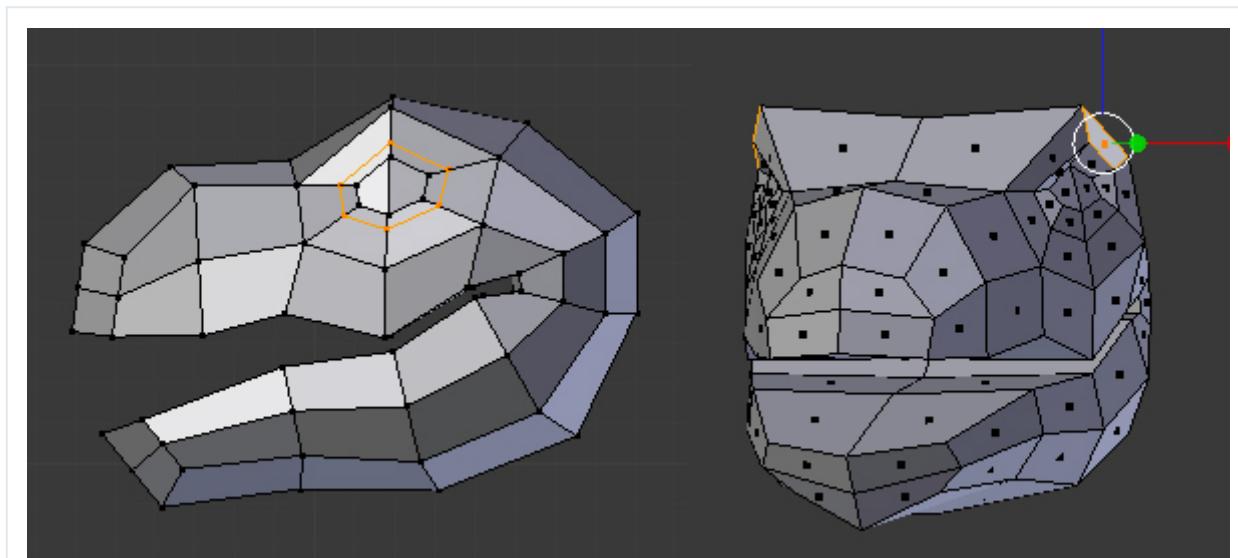
Step 22

Select the two faces shown below. This area will hold the eye loop. Press "E" to extrude the faces, but do not move the mouse and left click. Instead "RIGHT-Click" to leave the extruded faces where they are (we don't want to move the new ones.) With the new faces already selected, press "S" and scale them down to form the eye.



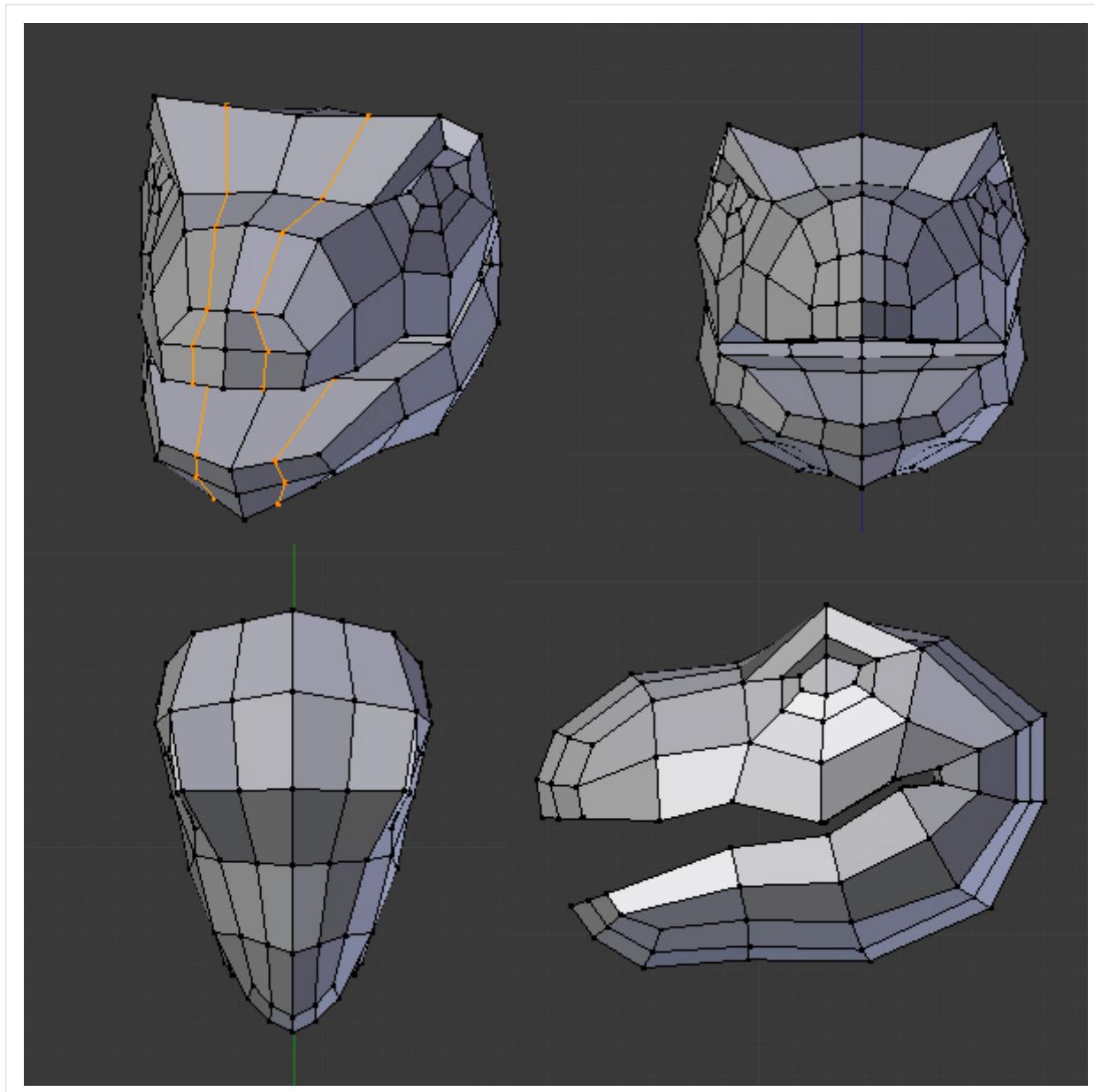
Step 23

Add another loop running around the eye. Tweak the vertices to give them a good eye shape and the loop around it. You can switch between "Face" select mode and "Vertex" select mode for editing. Again check the model from all angles.



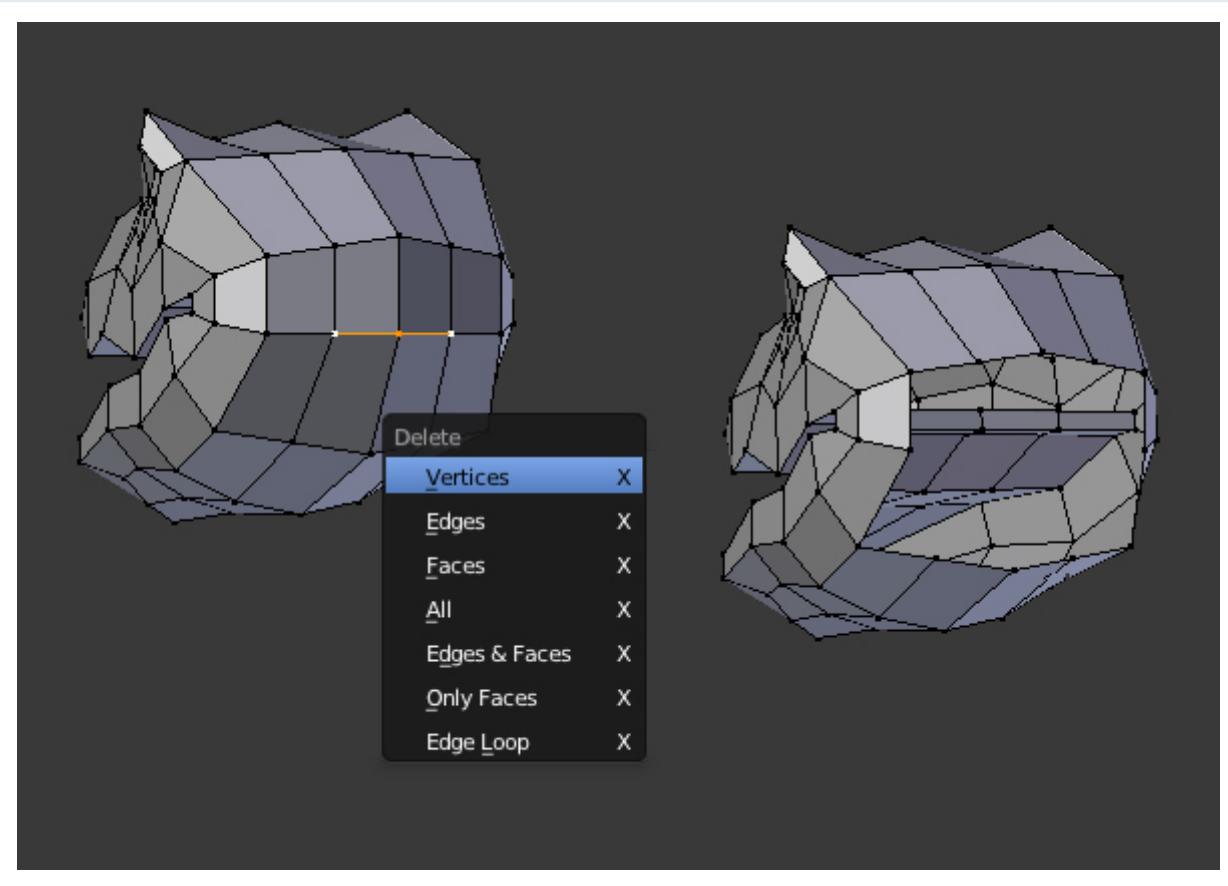
Step 24

Add another Edge Loop near the center of the head. Tweak the vertices to bring out the eye loop, and give more roundness and shape overall.



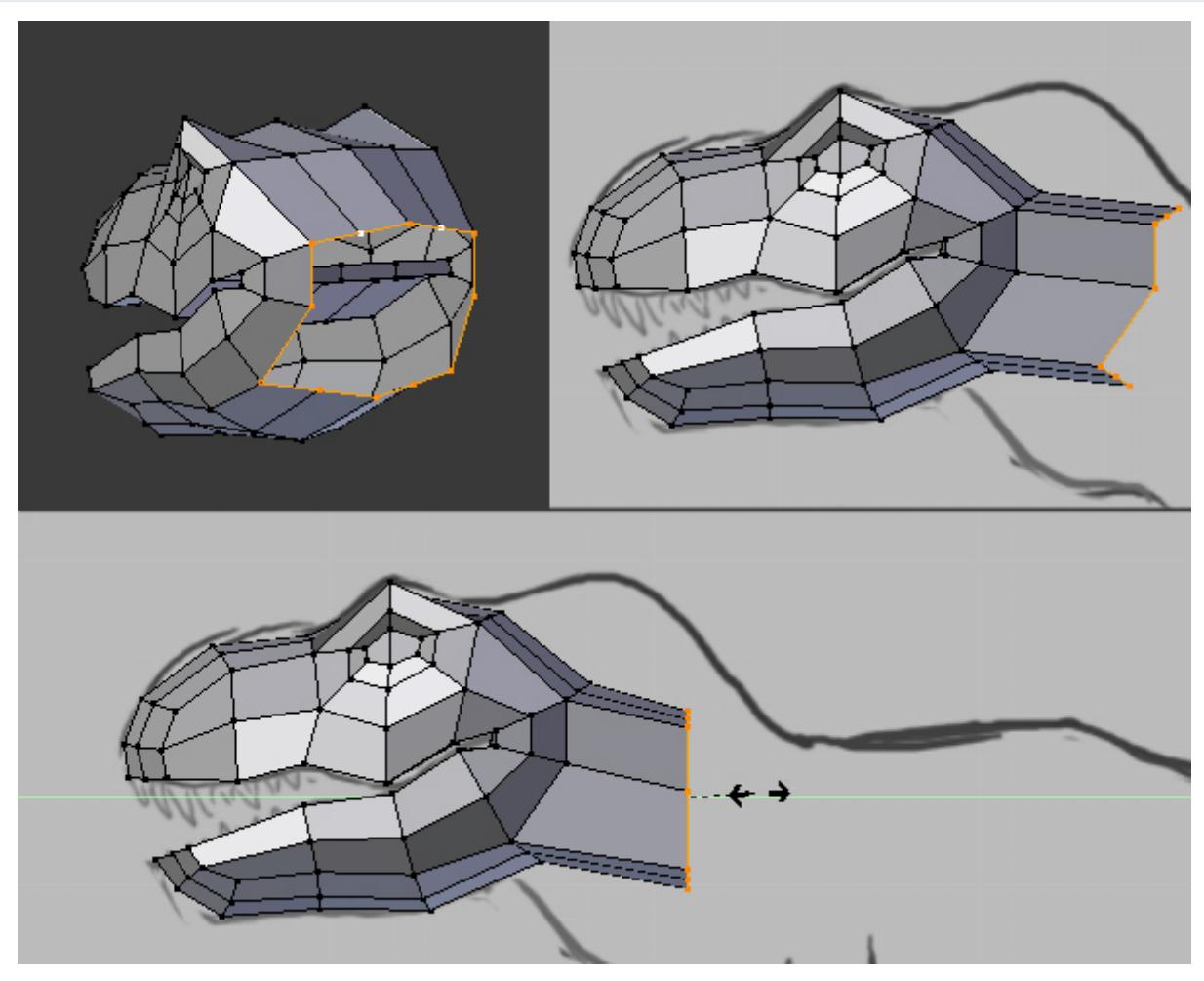
Step 25

Select these two vertices at the back, and delete them.



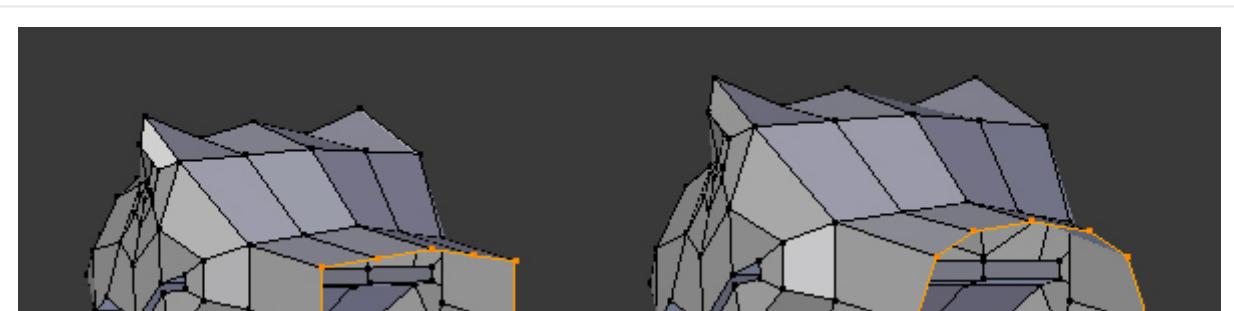
Step 26

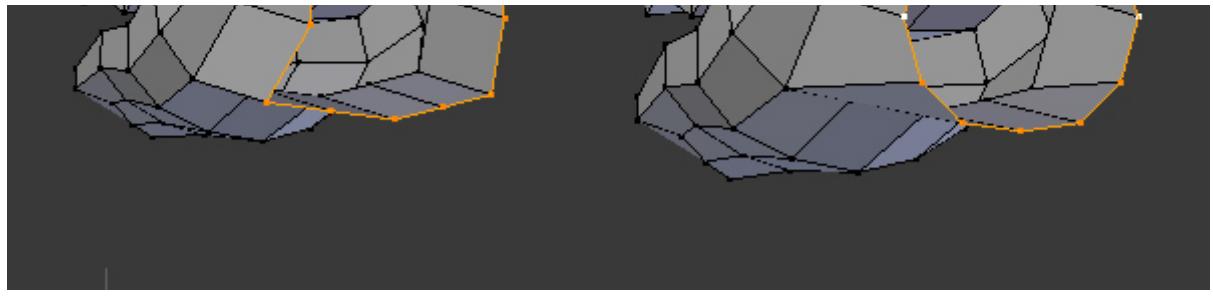
Select the edge loop with Alt+Right Click, and in the side view
Extrude them with the "E" key. With the new vertices selected,
press "S" and then "Y" to scale them along the Y axis or in short, to
align them in a line.



Step 27

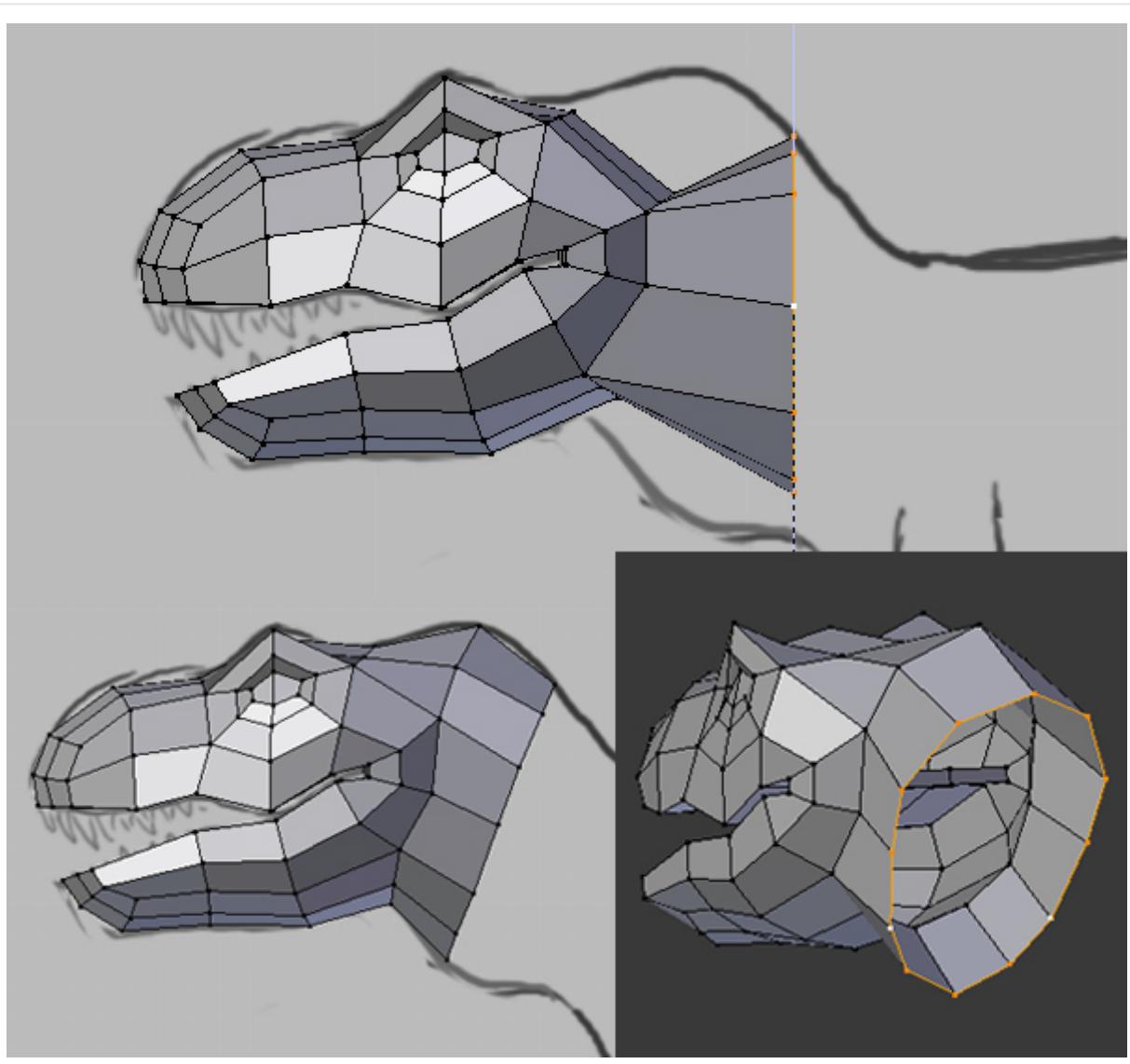
Adjust the vertices to create a nice round shape.





Step 28

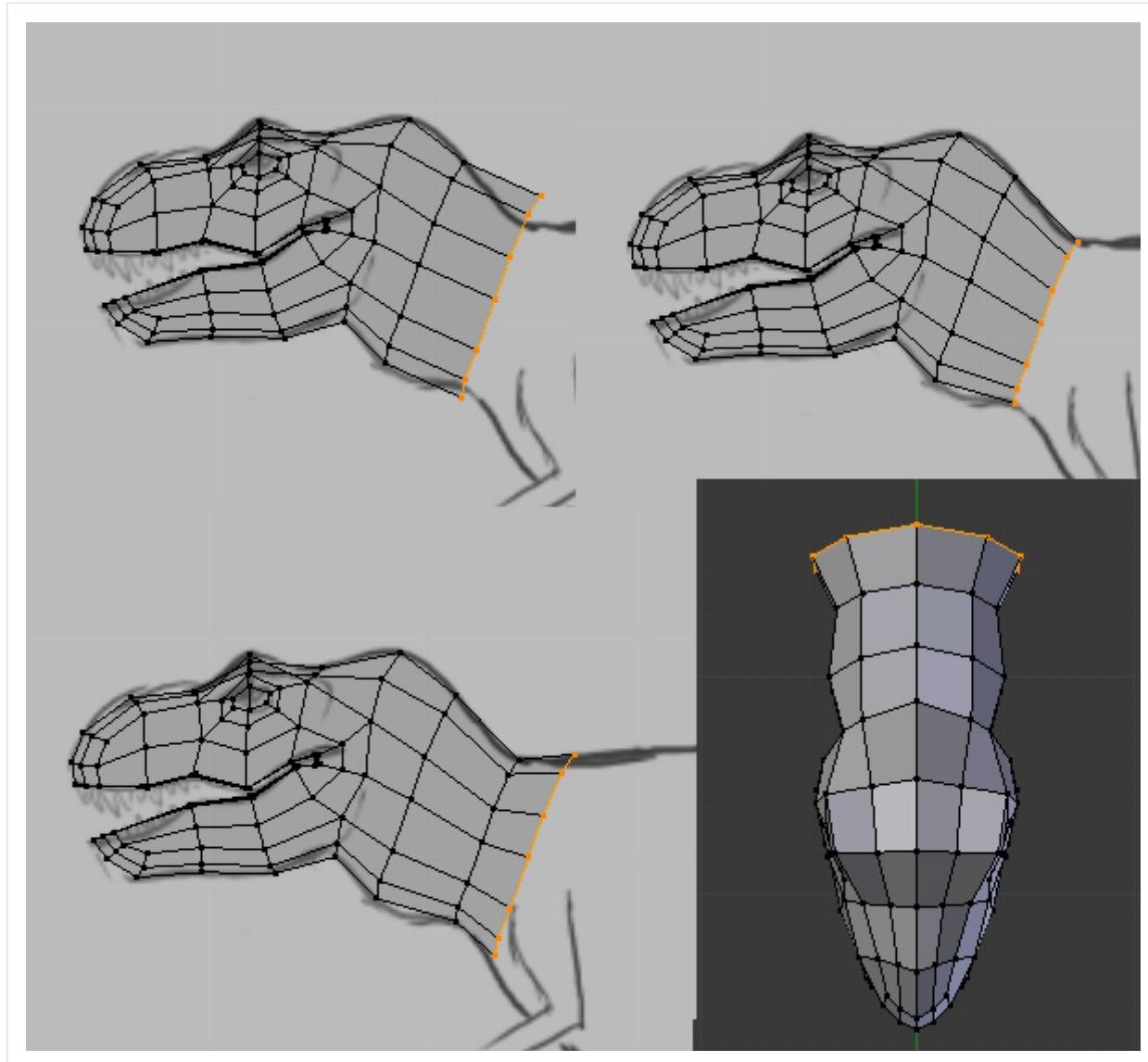
Scale the vertices only on the Z axis, and tweak them to match the reference.



Step 29

Extrude the loop of vertices, and Scale and Rotate them to match the reference. Extrude a few more times to form the neck. Tweak

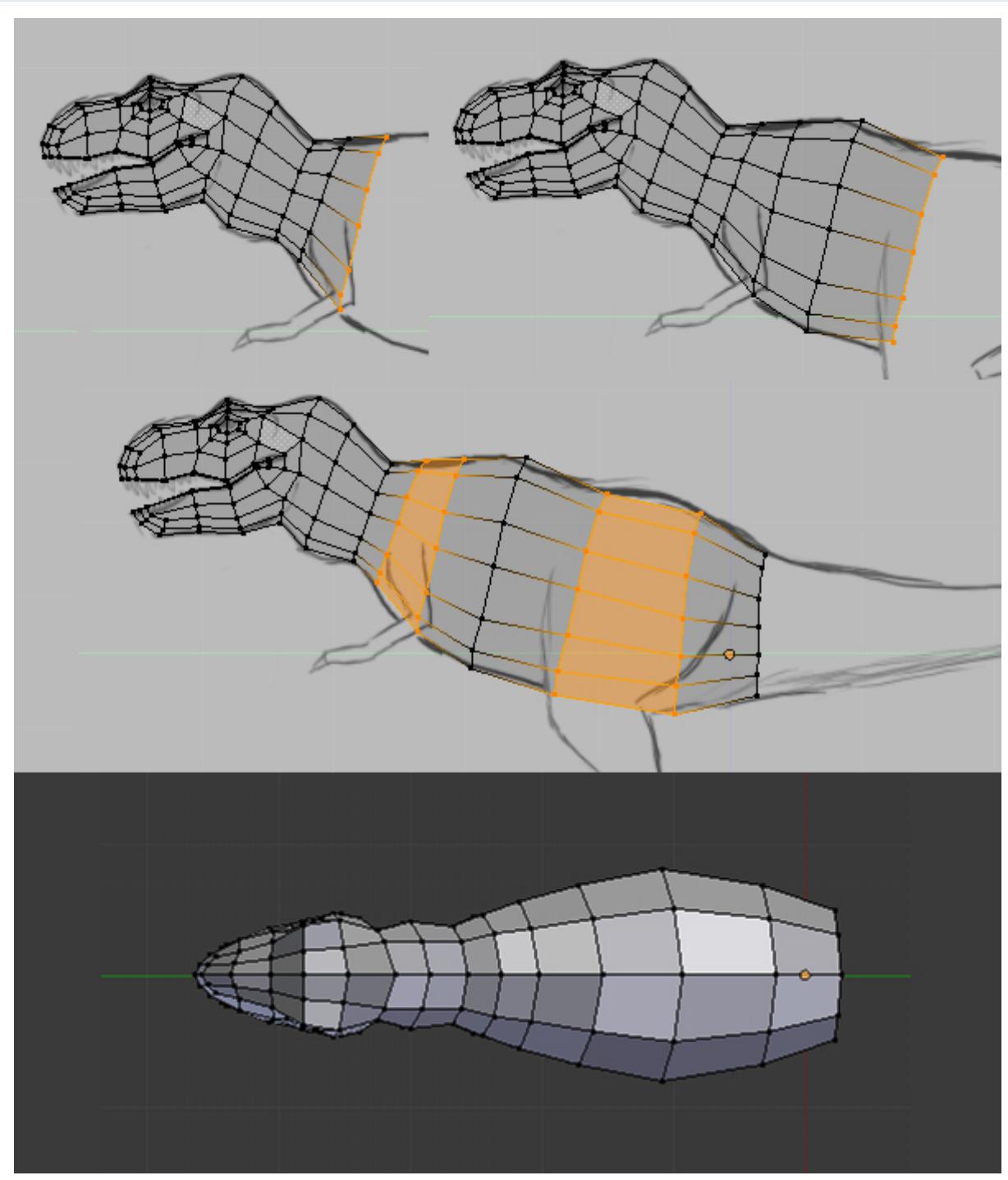
the loops from all angles.



Step 30

Now using the same method construct the rest of the body.

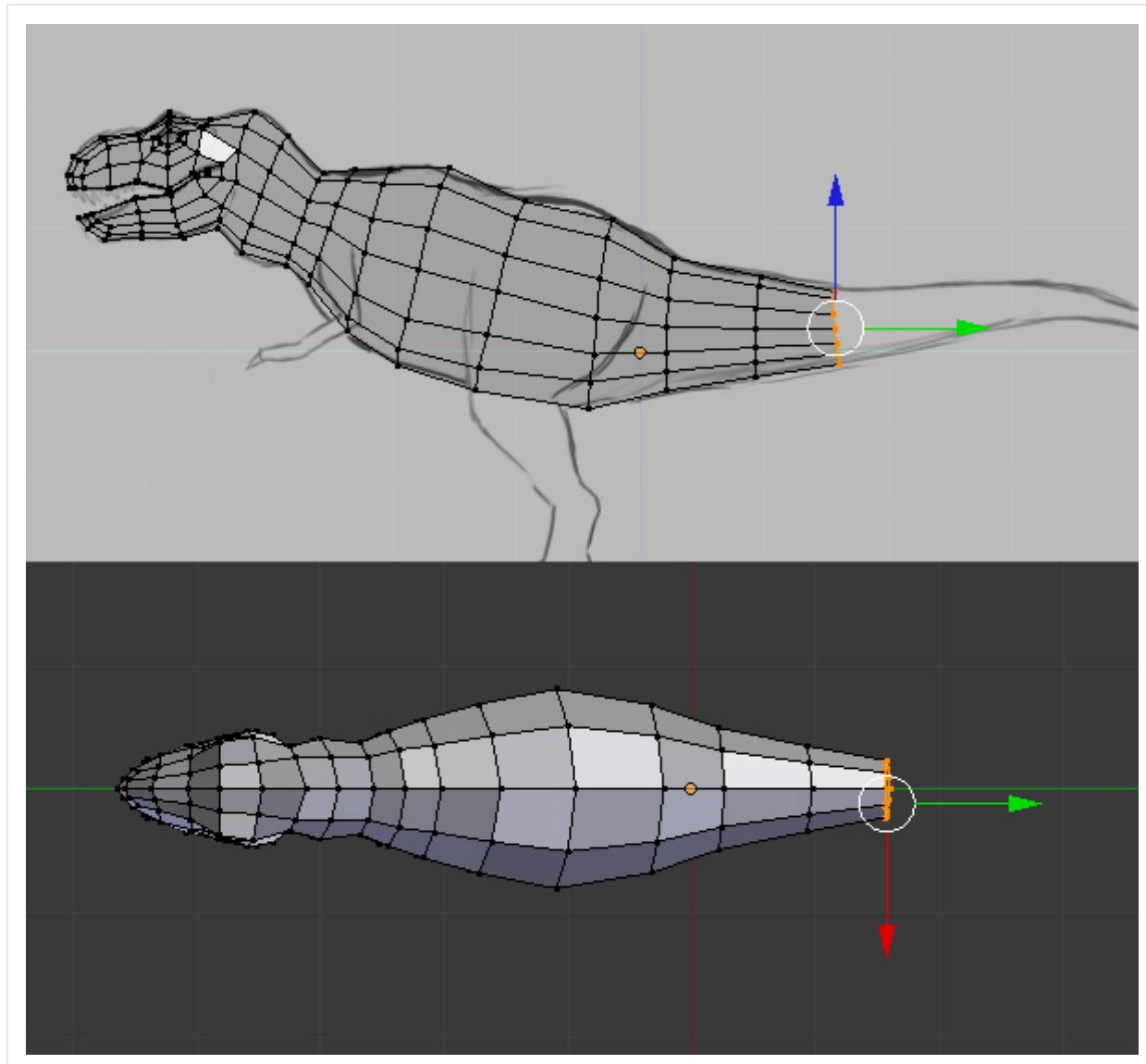
Extrude, Rotate and Scale the vertical loops as you go, and check from the Top view as well. Adjust the vertices to give the body a nice shape. I have kept the loops marked below in mind while constructing, for the limbs to come out of.



Step 31

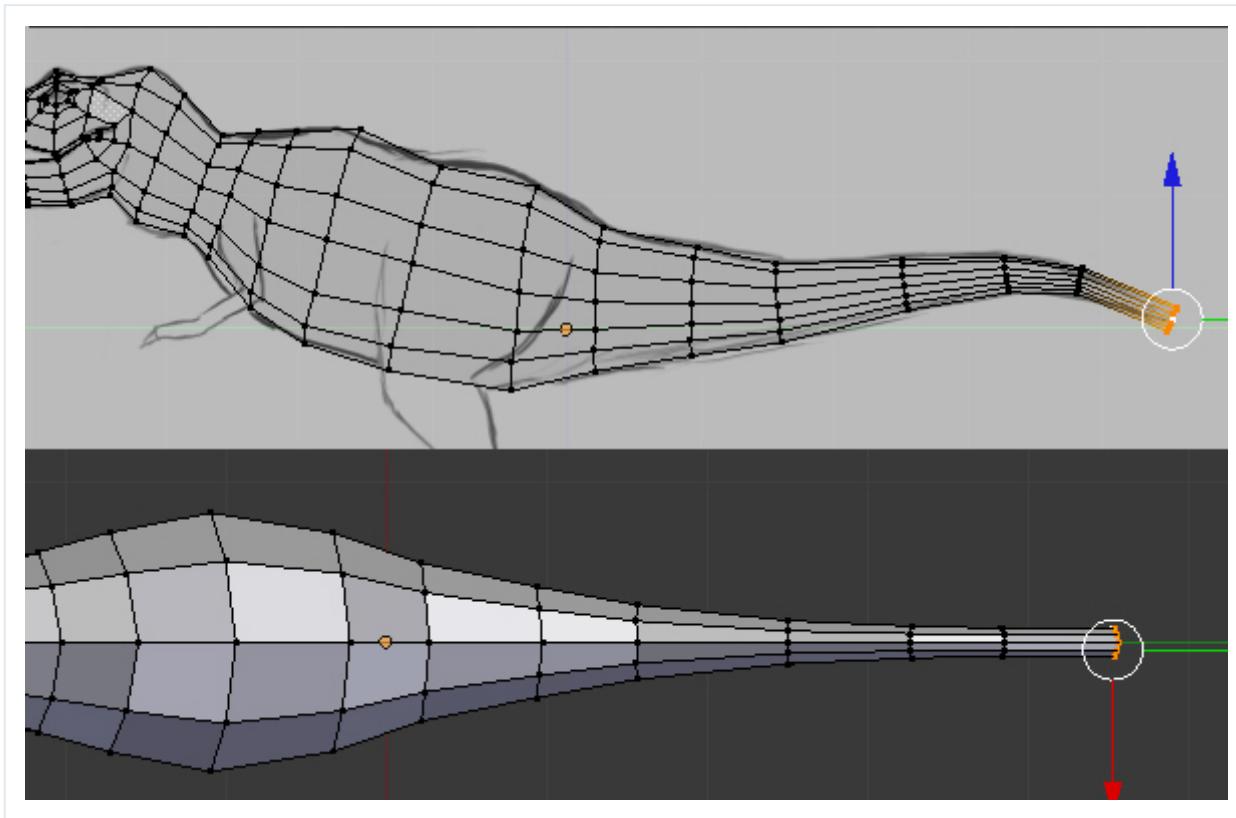
...
...

Now extrude the tail, matching the reference. You might need to move the vertices close together in the Top view, but do not move them too close or they will stick as we have "Clipping" on in the mirror modifier settings.



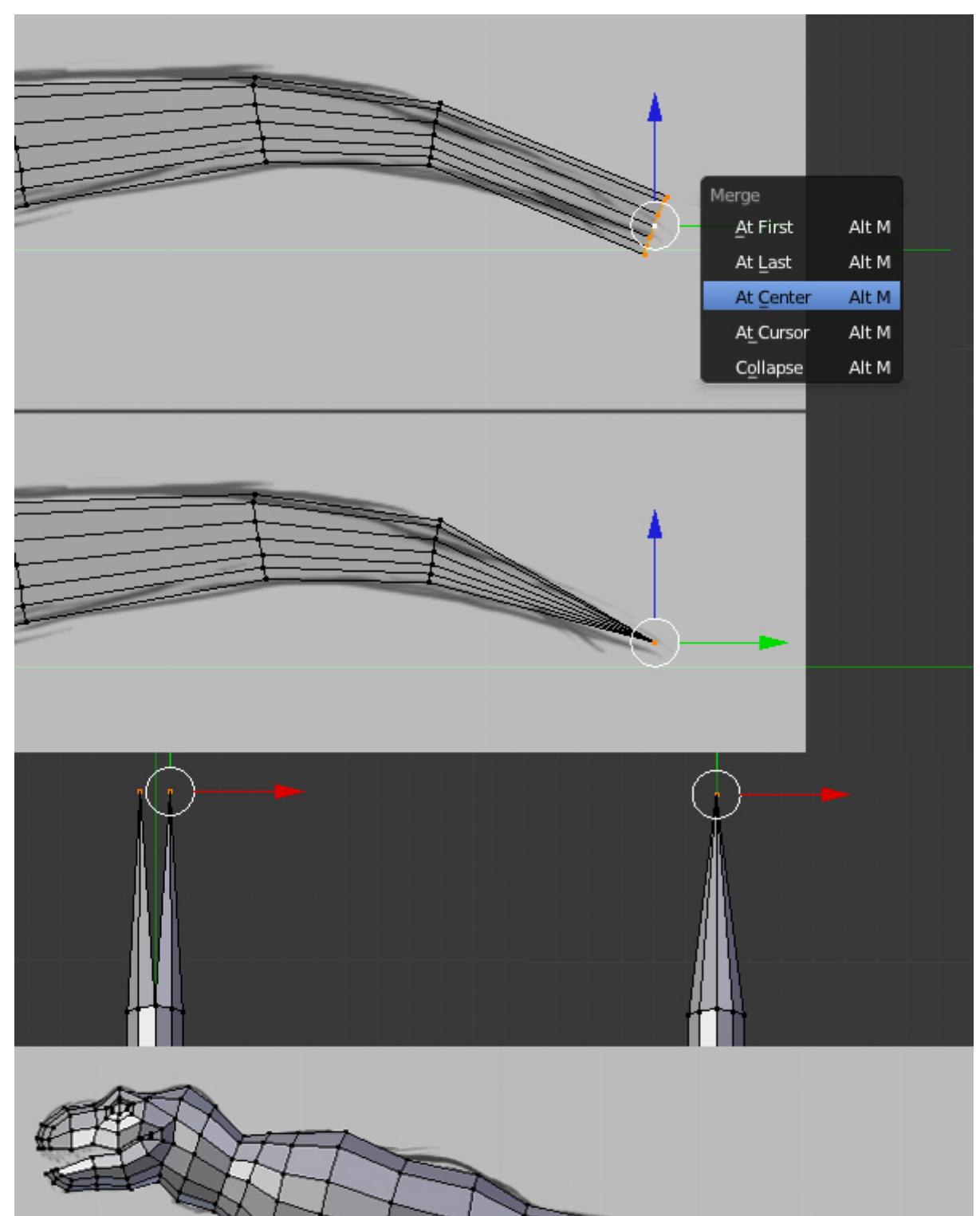
Step 32

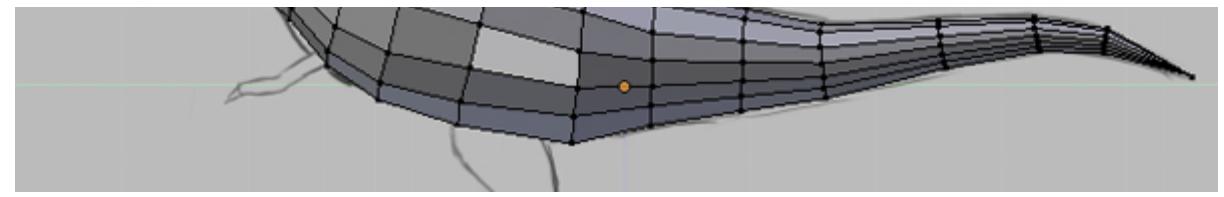
Complete the tail, leaving the last point.



Step 33

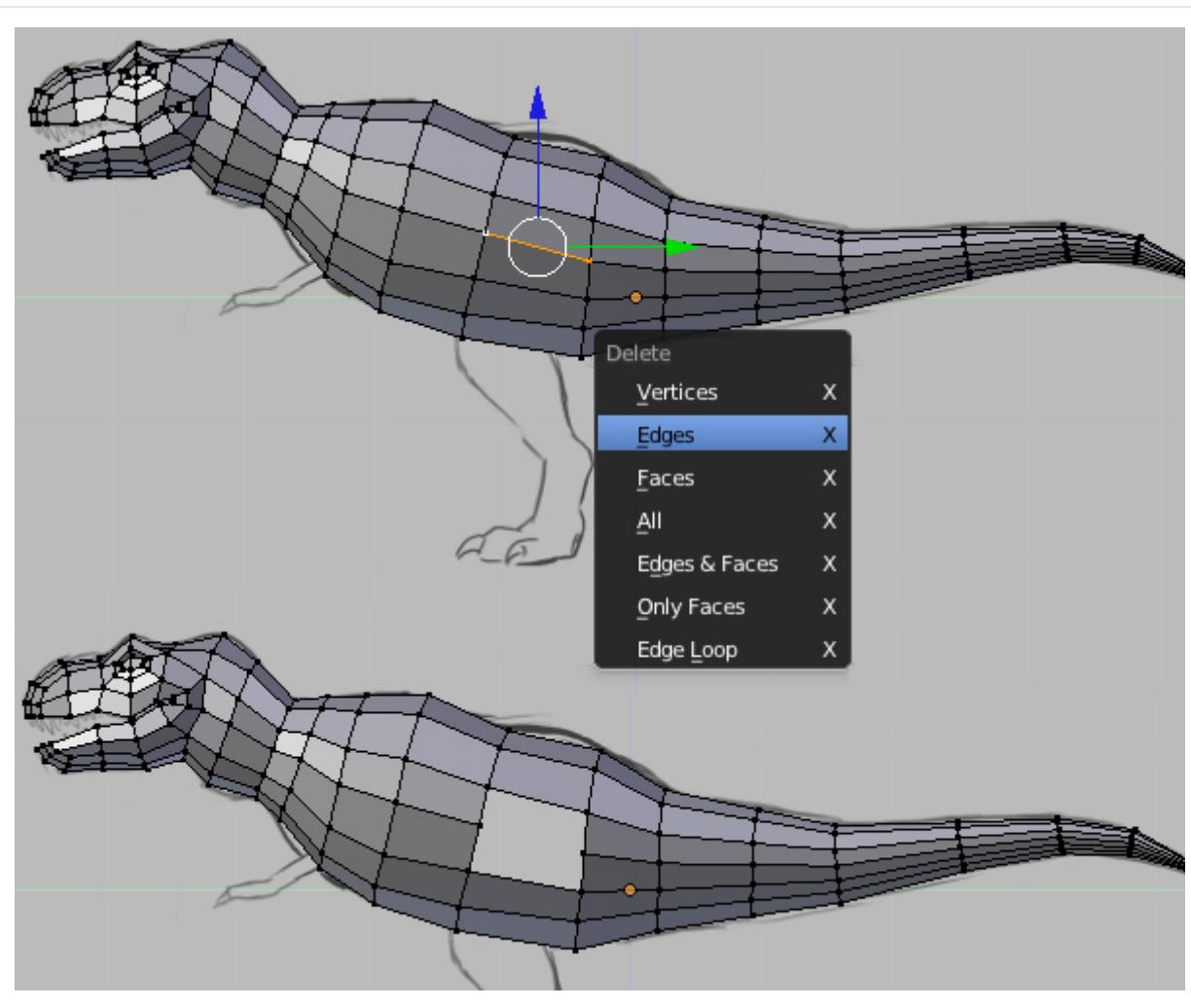
Select the last loop and press "Alt+M" and click on "Center" to merge all the vertices into one. In the Top view, move the vertices towards the center and they will snap. And now you will have the body ready!





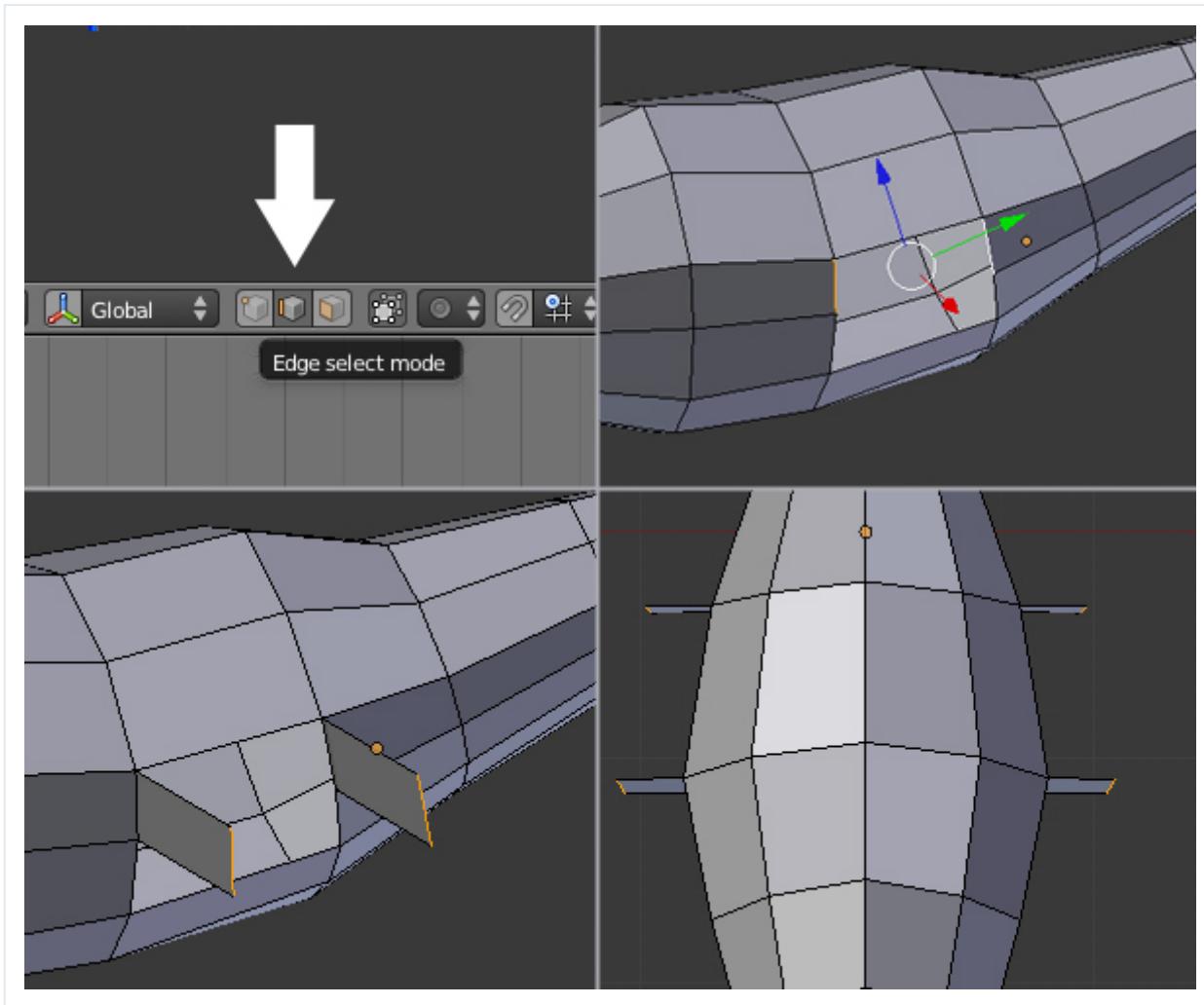
Step 34

Select and delete this edge.



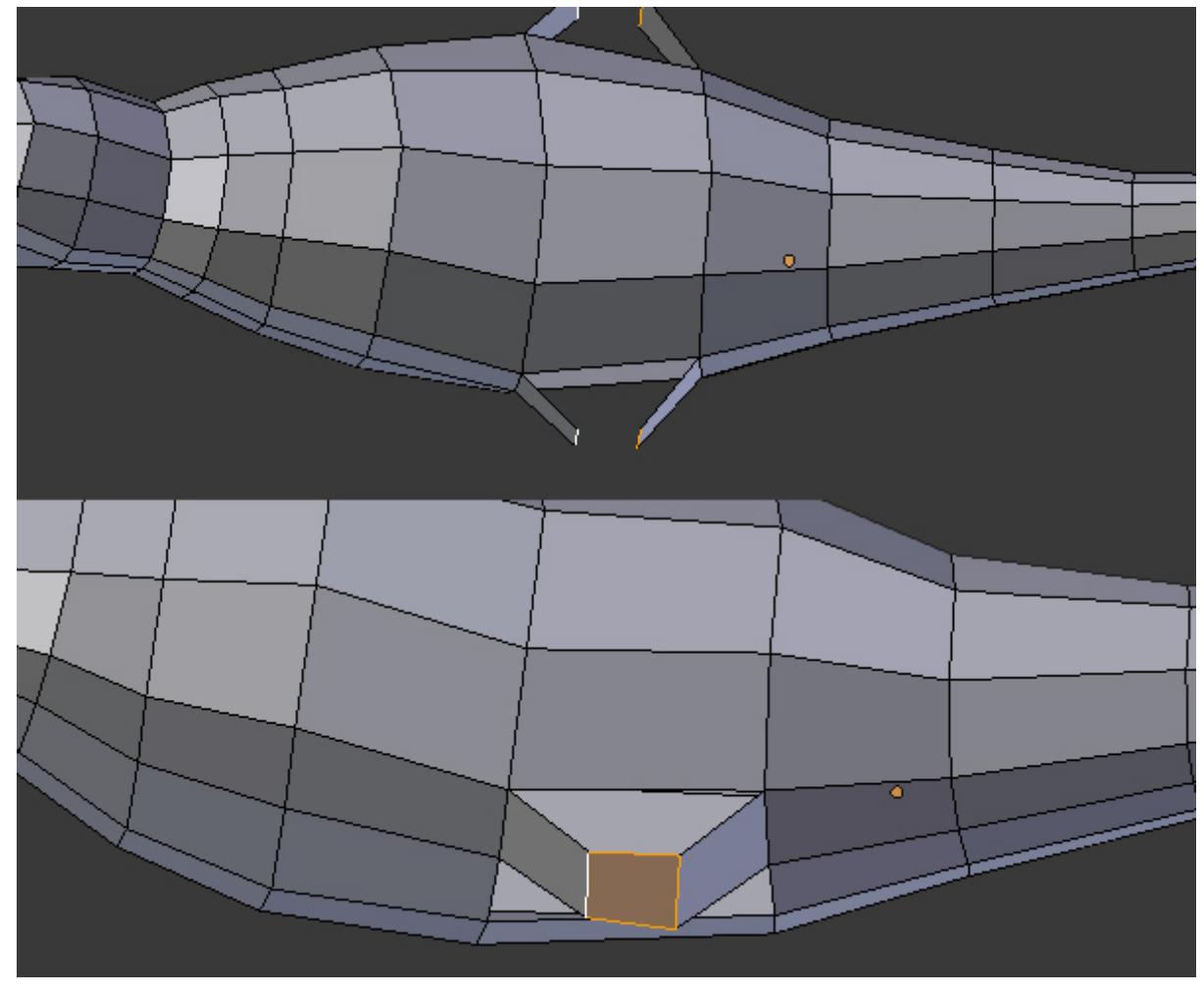
Step 35

With "Edge" select mode, select the two corner edges shown below and extrude them.



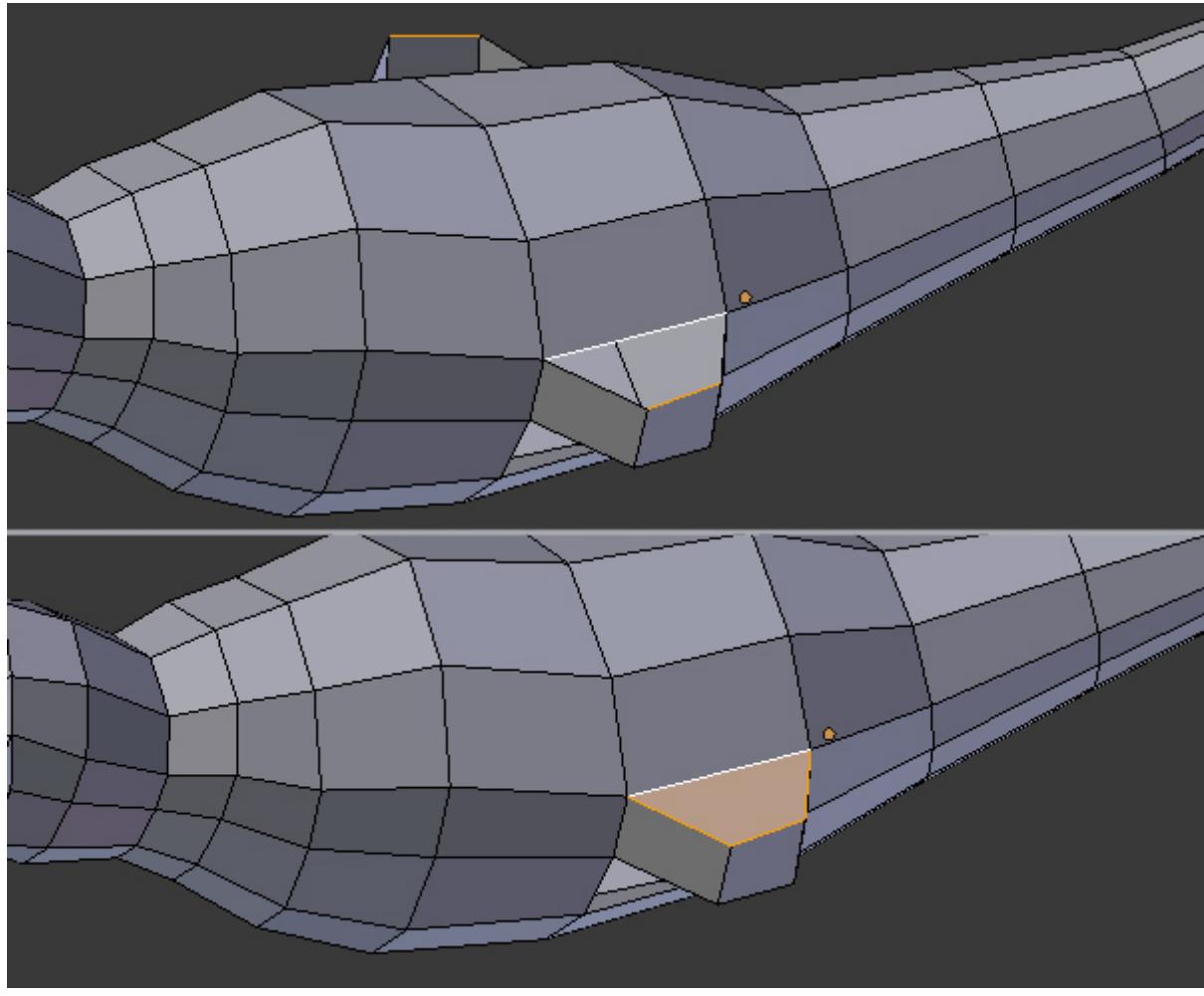
Step 36

Move the edges closer together and press "F" to create a face between them.



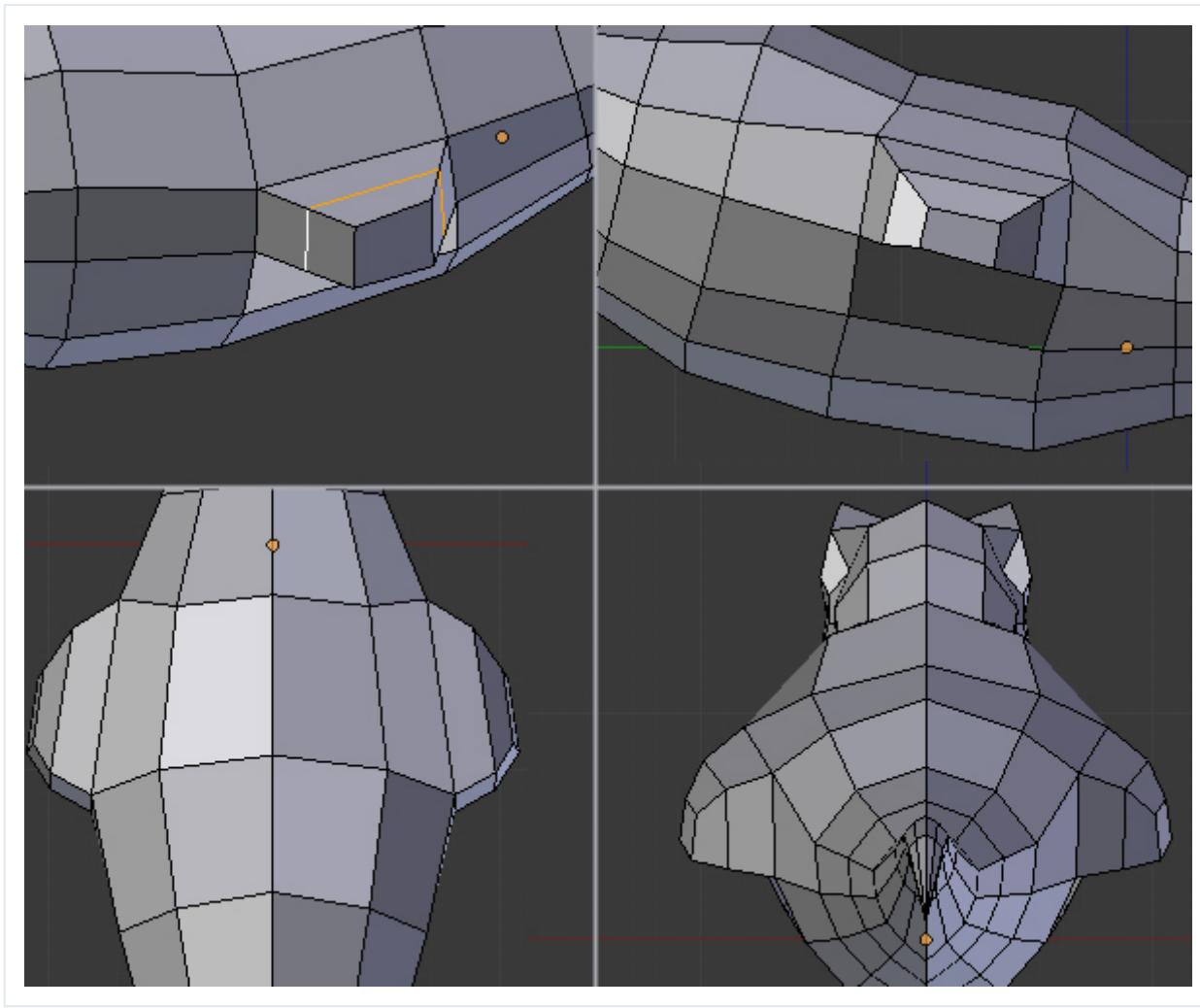
Step 37

Select the top two edges and press "F" to make a face.



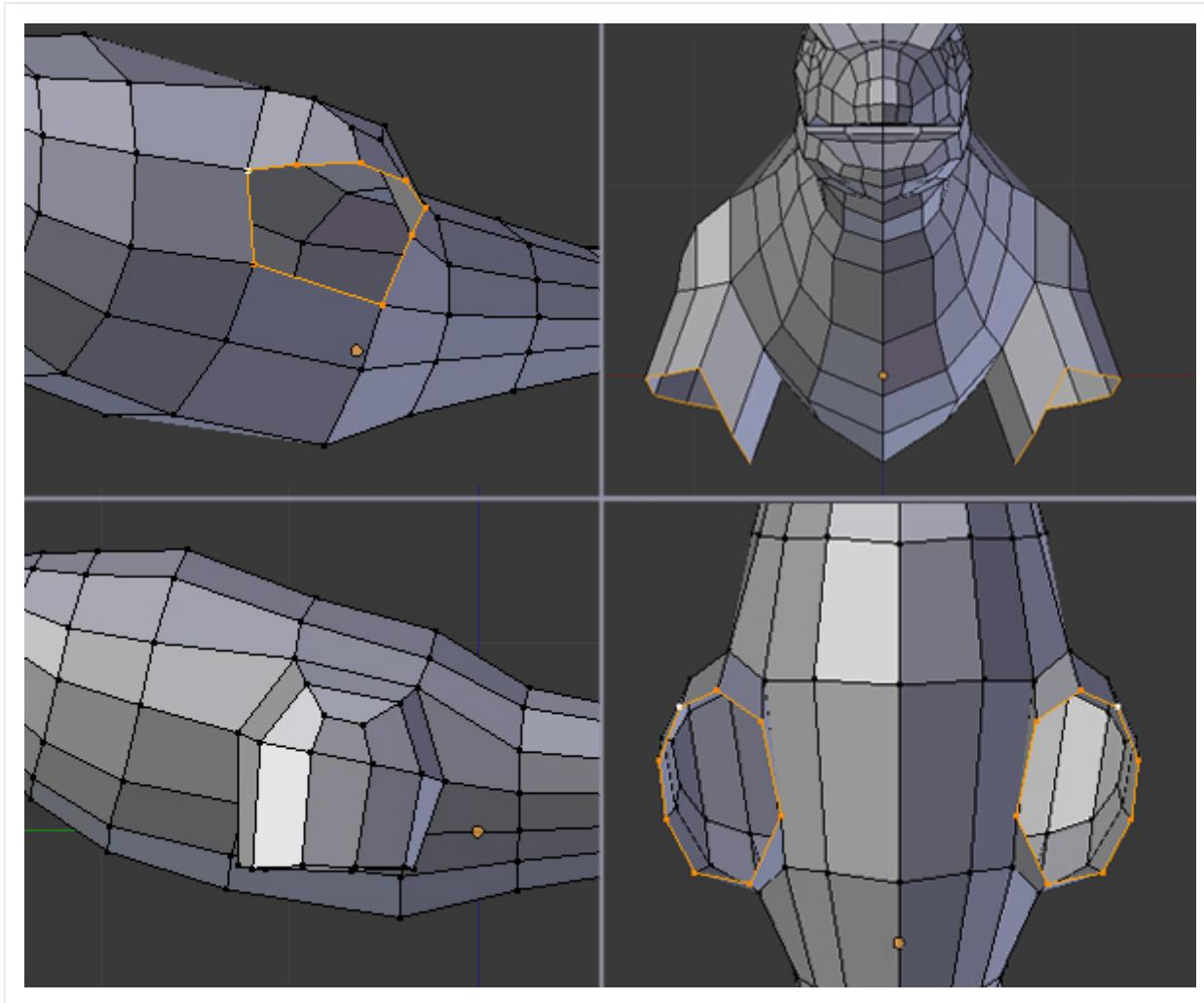
Step 38

Create an edge loop with "CTRL+R" and tweak the points to give it roundness.



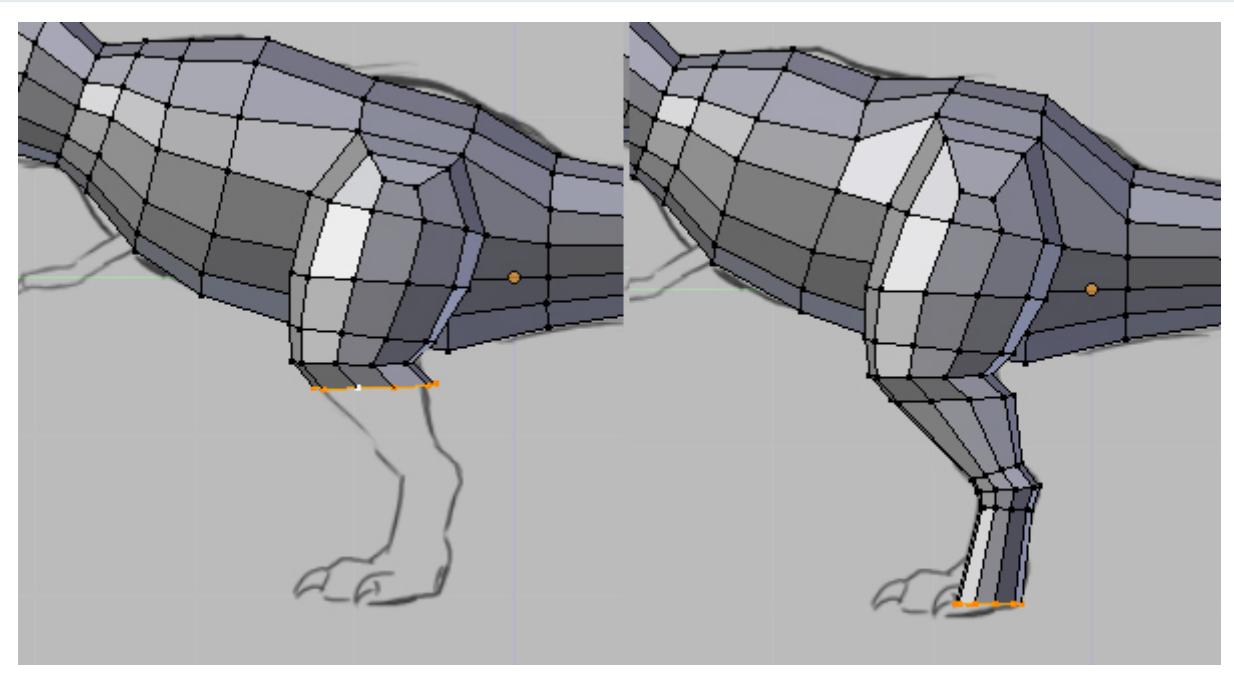
Step 39

Select the edge loop with "ALT+Right Click" and Extrude. Tweak the points from all angles to give roundness.



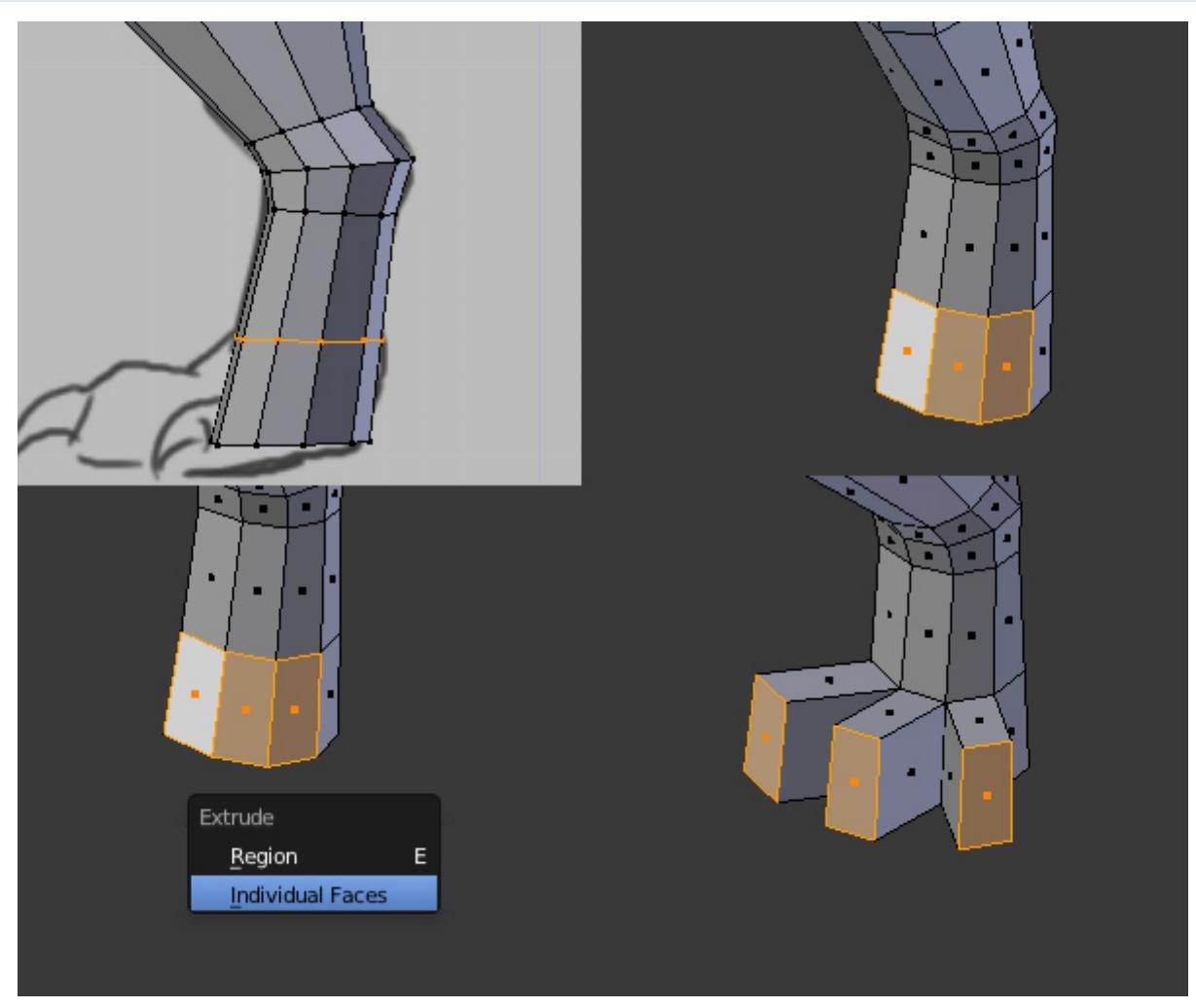
Step 40

Complete the leg using the same Extrude, Rotate and Scale method. Check from the front as well. Aim to have three rows of vertices running around the joints (as shown.)



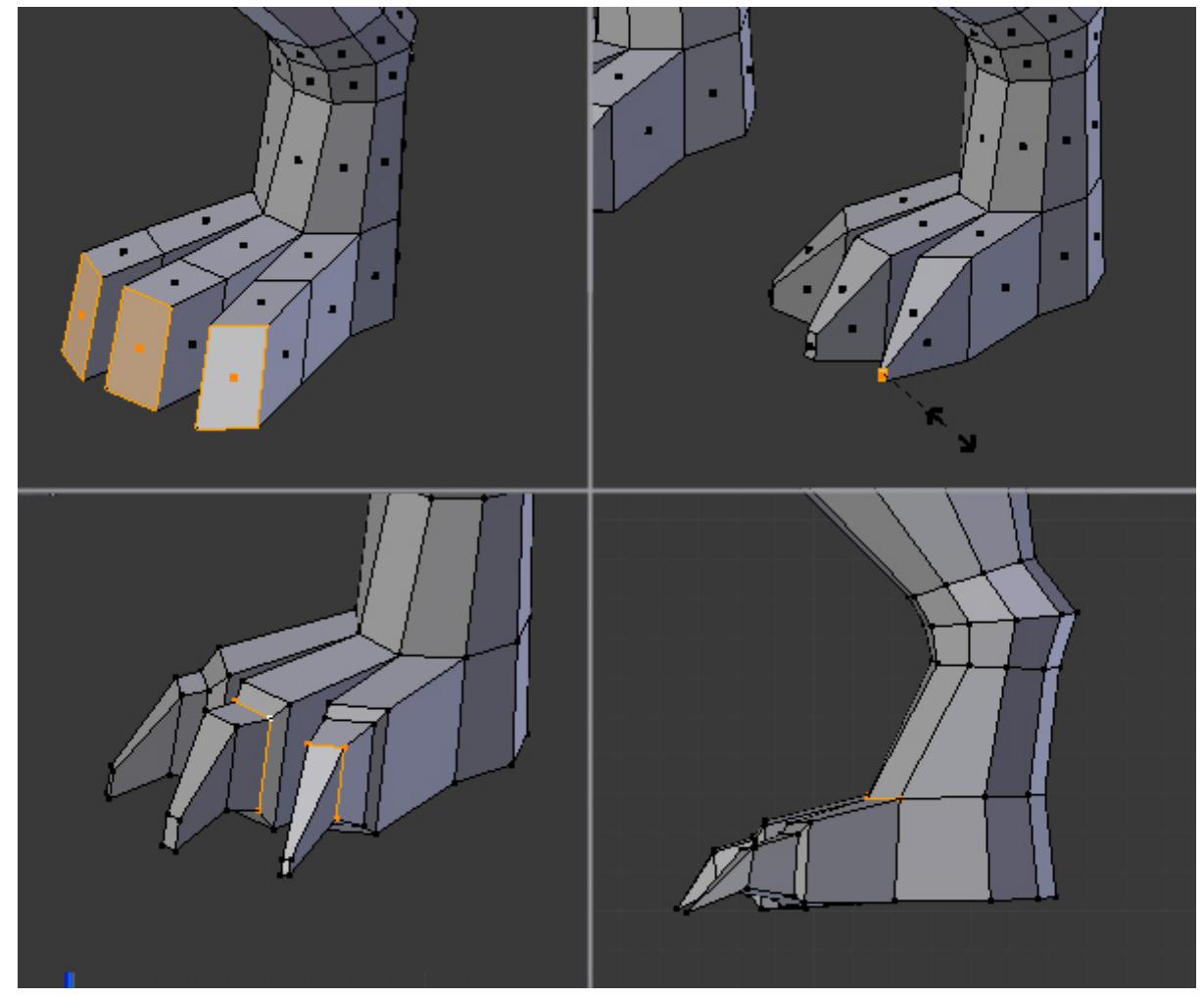
Step 41

Now create an Edge loop just above the toe, and select the front three faces. Press "ALT+E", select "Individual Faces" and pull out the toes.



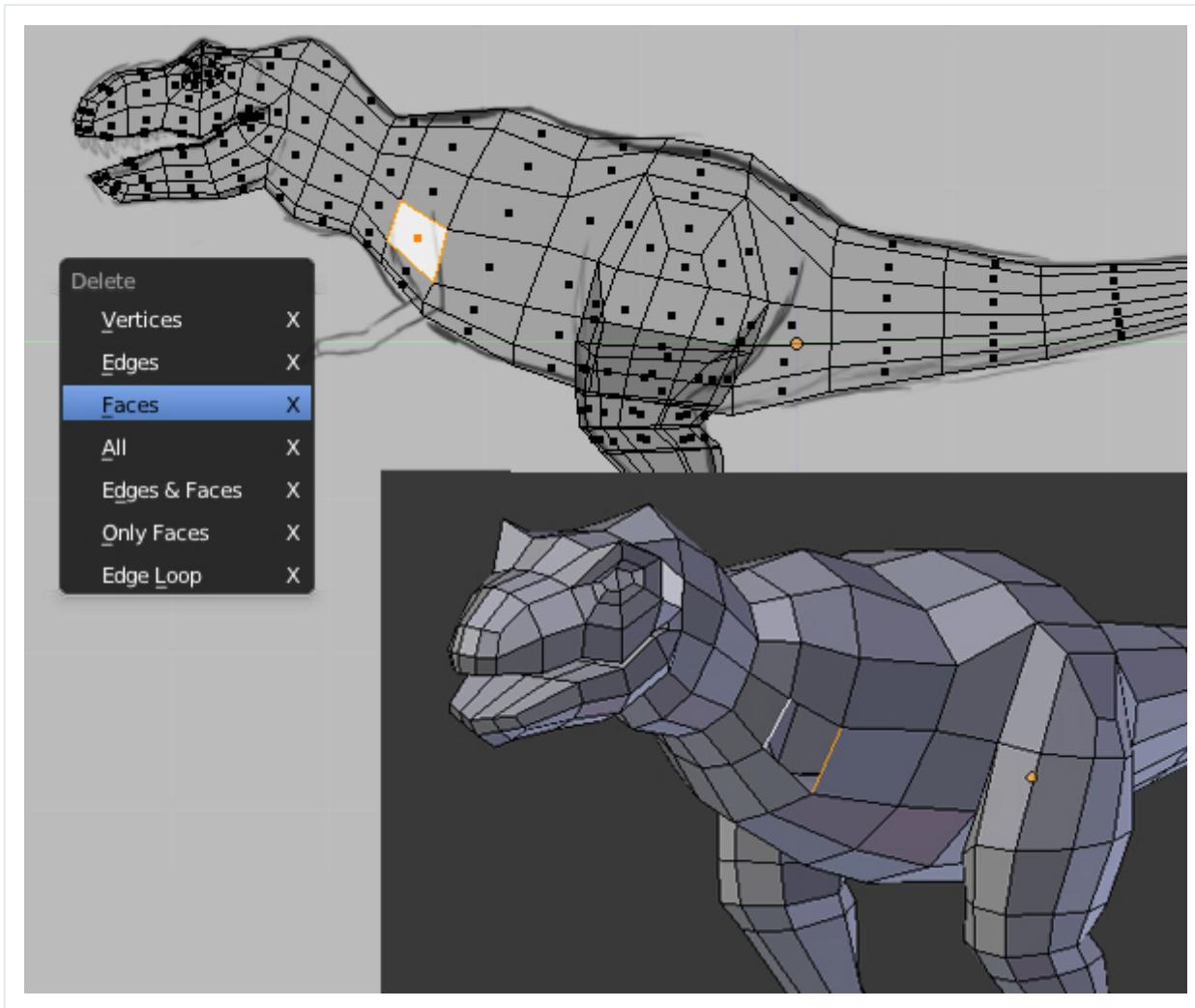
Step 42

Extrude one more time and Scale down the new faces. Insert edge loops and shape the toe (check from all views.) You can combine the tip face into one vertex using "Alt+M".



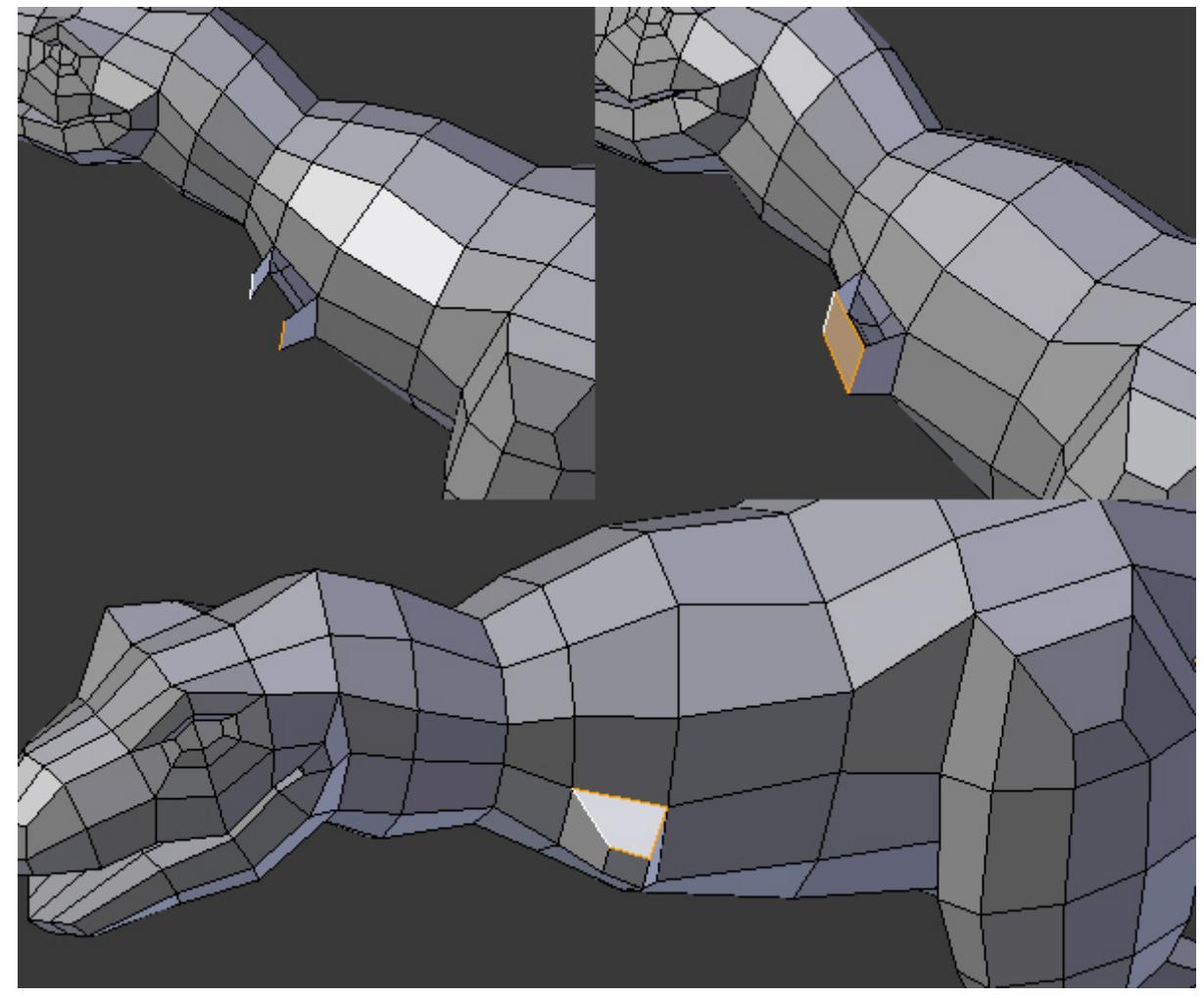
Step 43

Select the faces where the arms will start and delete them. And then select the corner two edges as shown.



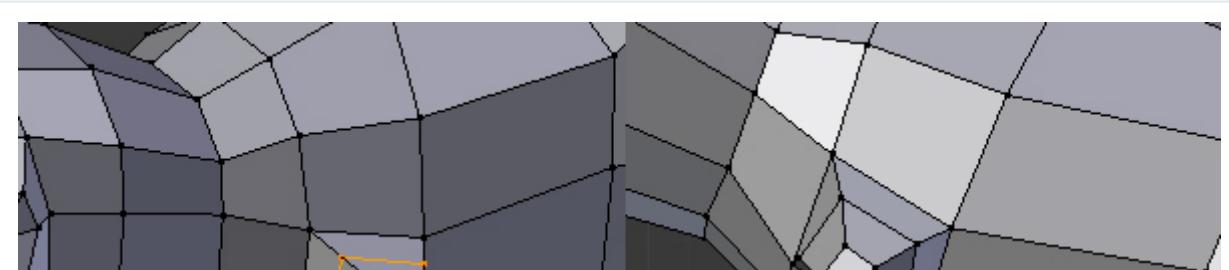
Step 44

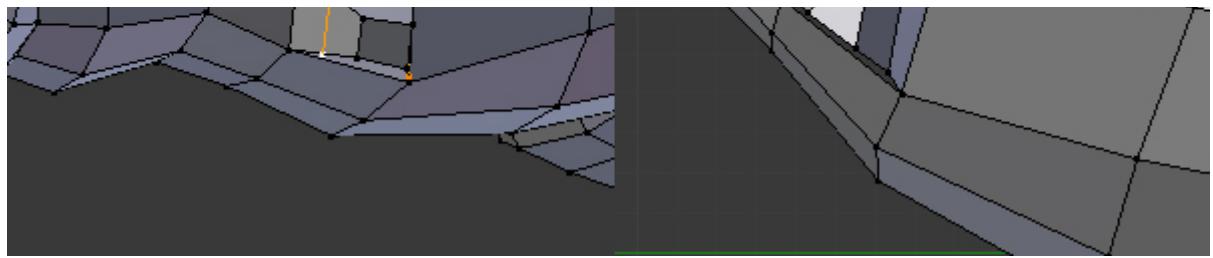
Press "E" to extrude them out. With the new edges selected, press "F" to fill the hole with a face. Do the same with the top two edges.



Step 45

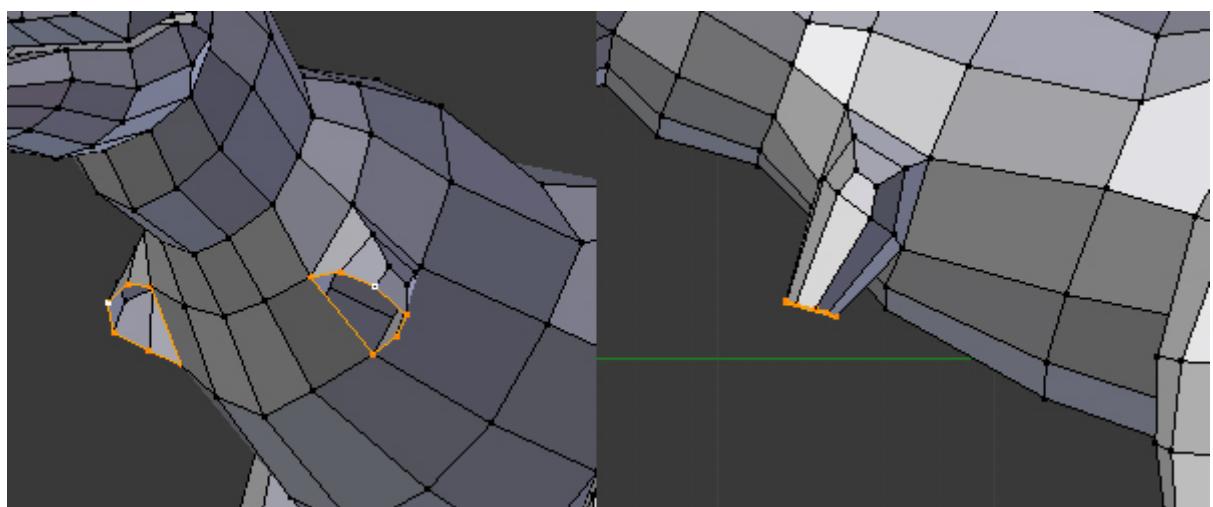
Insert a new loop and tweak it to create a nice round shape.





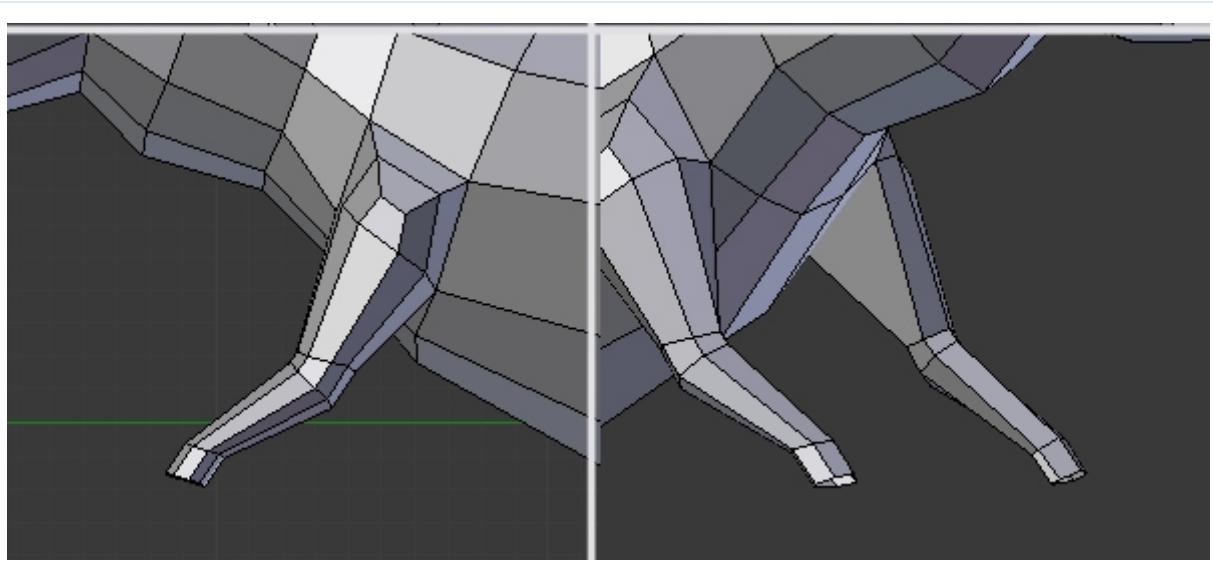
Step 46

Select the last loop and extrude it to bring out the arm.



Step 47

Extrude, Rotate and Scale the loops to complete the arm (as shown below.)

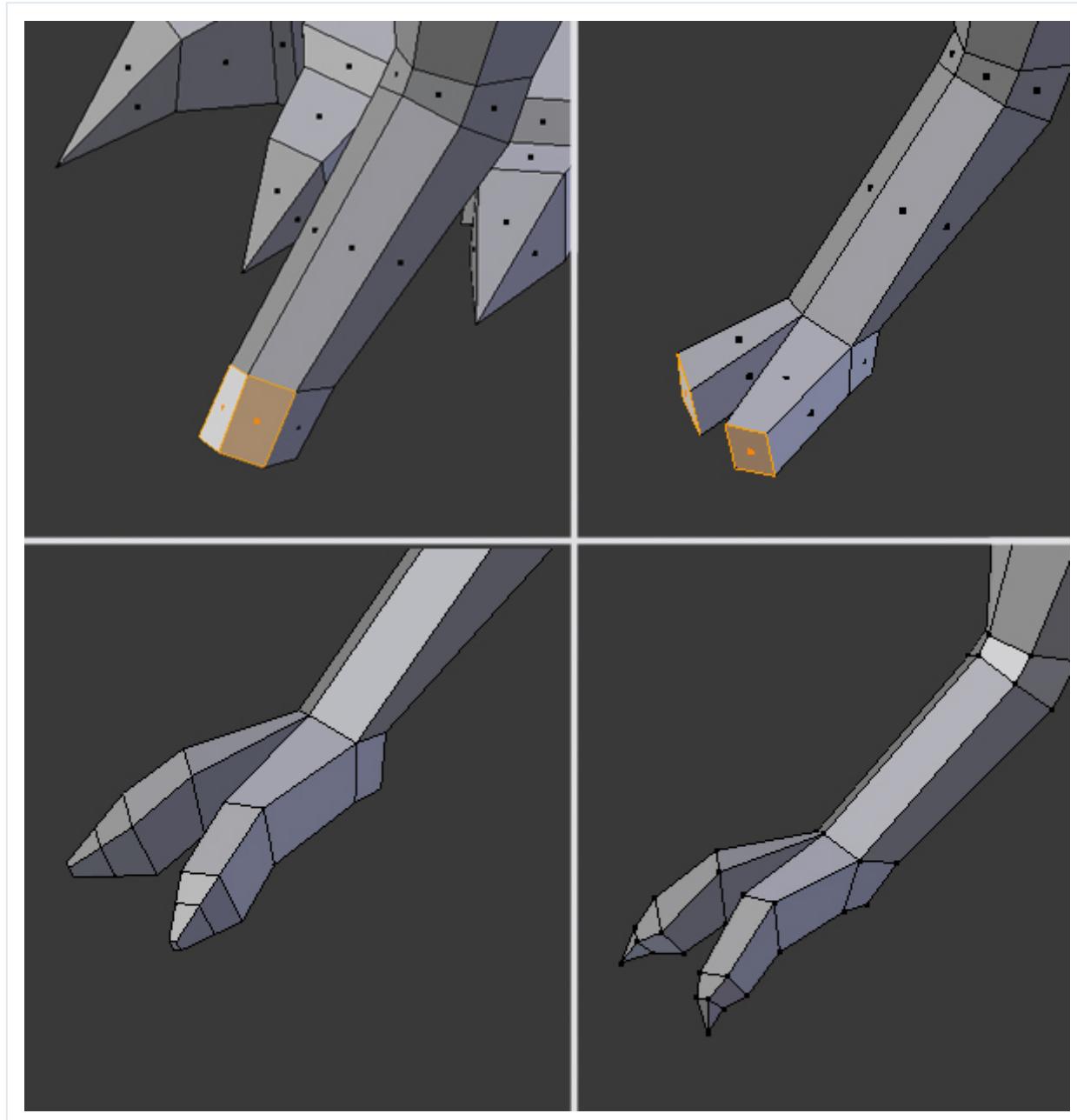


Step 48

Select the front two faces and extrude them out. Insert new edge

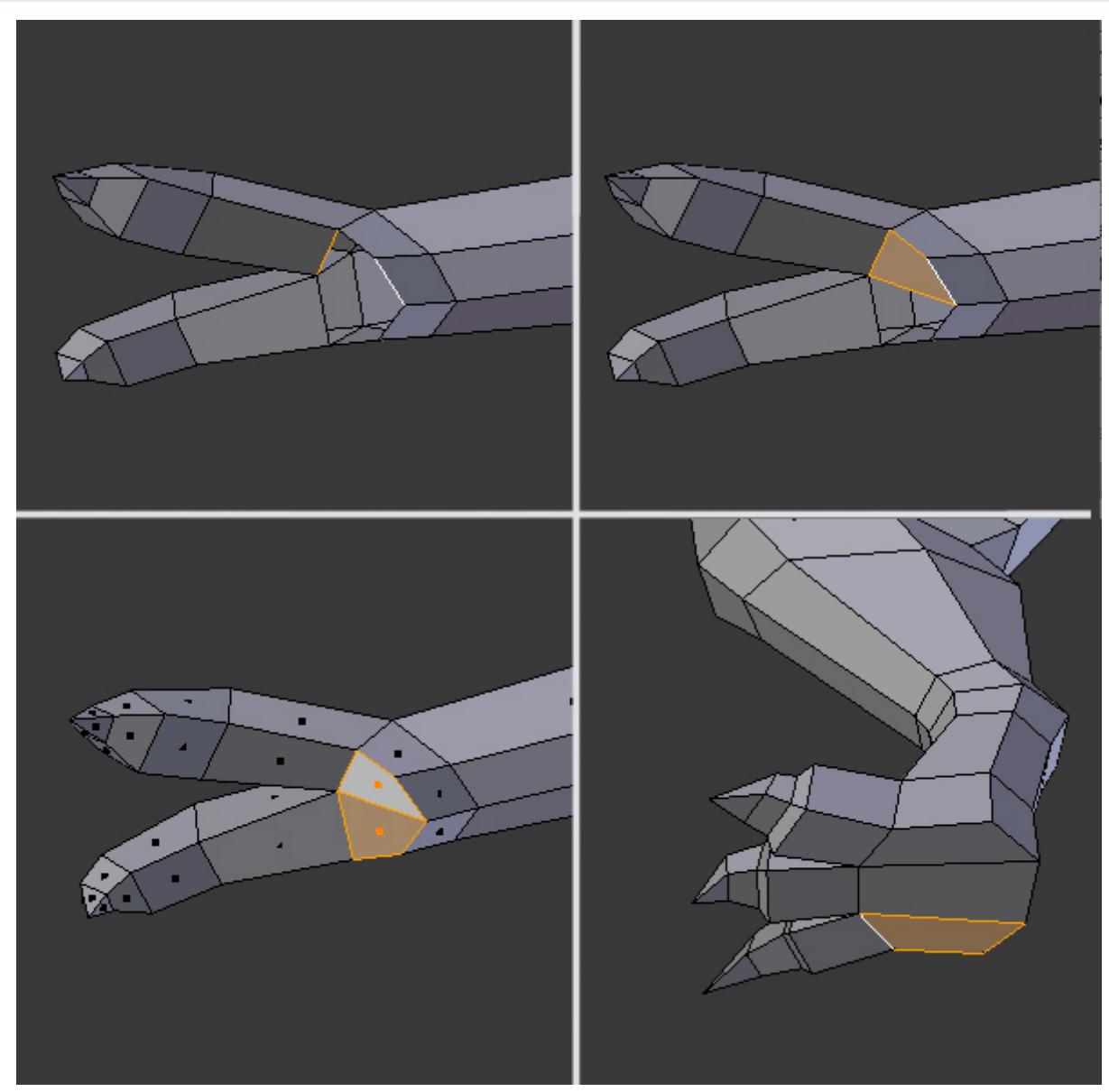
~~SELECT THE FRONT TWO FACES AND EXTRUDE THEM OUT. INSERT NEW EDGE~~

loops and tweak them to give shape to the toes.



Step 49

Select the bottom edges (two at a time) and press "F" to fill. Also do the same for the bottom of the foot.

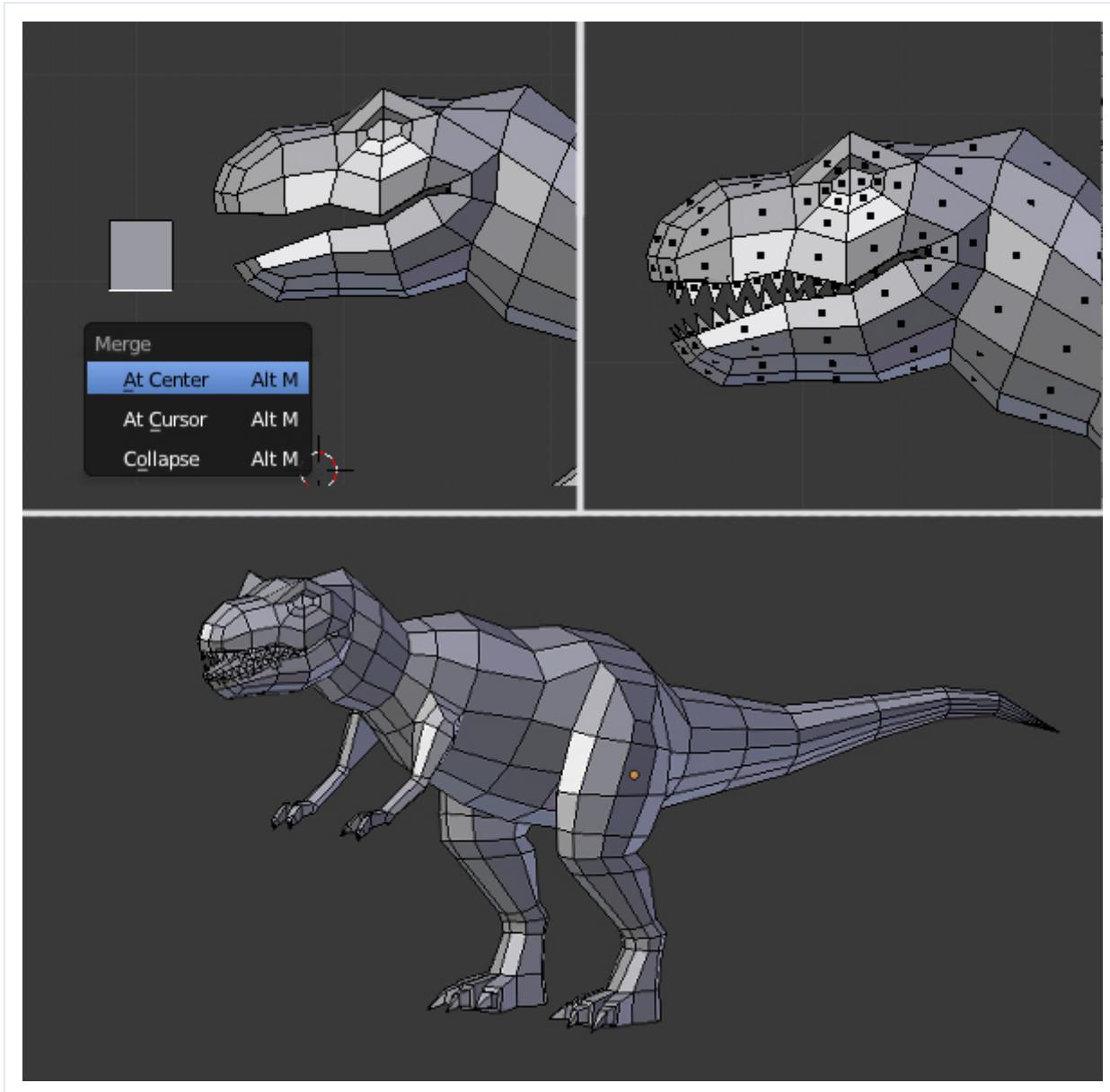


Step 50

To add teeth, create a new Plane, press "Shift+A" and click on the Plane. Select the bottom two vertices and press "Alt+M" to merge them. Place the triangle inside the mouth, you can press "SHIFT+D" to make duplicates then align them to create the

Ctrl + F9 to make duplicates, then align them to create the

desired effect. Remember to check from all angles. Your Low Poly
T-Rex is ready!



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- [Model, UV, and Texture a Complete Manga Character in Blender](#)
- [Re-Topologize a Game-Ready Alien Head in Blender](#)

- [Sculpt, Model and Texture a Low-Poly Skull in Blender](#)

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Karan Shah

Karan Shah is a 3D Artist and Animator from India. He is a BFA Graduate with specialization in sculpture. An inclination towards the digital medium made him a self taught computer artist. He is currently freelancing..

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Name



Jon

7 years ago



Great tutorial. Getting the head to 'mirror' (step 13) and aligning the teeth (step 50) were the parts that took me the longest. Here's my effort so far: → [View](#) – disq.us

8 ^ | ▾ Reply



Sérgio Toledo

4 years ago



Very good!

Here is my try.

[View](#)

5 ^ | ▾ Reply



Joabe Procopio

6 years ago



Hello, I'm from Brazil and I loved your tutorial, always wanted a Tyrannosaurus in Blender, and thanks to you I got. Thank you!! :D

[View](#)

5 ^ | ▾ Reply



Kharol

7 years ago



This is my first Blender project! I added some color and a mane, I think I did a pretty good job on the teeth and the hardest part for me was to get the legs and hands right. Thank you very much for sharing this tutorial! :D

[View](#)

5 ^ | ▾ Reply



Vikas Rao

3 years ago



This is a gr8 tutorial....I used the UV and texturing steps and some tinkering around in GIMP really helped me complete this project which took practically forever...

[View](#) – uploads.disquscdn.com

4 ^ | ▾ Reply



LeRoy

7 years ago



Sofar this tutorial is the first on that I have been able to follow to the end of part one. I am now anxios to go on with part two.

3 ^ | ▾ Reply



CesarSan

4 years ago



One of the best beginners' tutorial I've ever followed and I've learned a lot. Thanks!

[View](#)

2 ^ | v Reply



madamimadam

8 years ago



Much better than video tuts !

2 ^ | v Reply



Radu Marin

5 years ago



This is my first project and, after many, many hours, I'm very happy with the results :) . Thank you for the tutorial, it was really good.

[View](#)

1 ^ | v Reply



Arthur Carvalho

6 years ago edited



Hey man, great tutorial, it was very useful to me, since i am not a great modeler of organics (i'm from brazil, so, sorry for any R.I.P. English). Here is the mine: [View](#) – disq.us

I am still going to do some adjustments before start texturing it, and as i want to use it in an animation, i am still going to add some subsurf. To get better, only if the tutorial covers the rigging process too, it's really great, thanks.

[View](#)

[View](#)

1 ^ | v Reply



Ibrahim

8 years ago



Best Tut ever!!!! Very simple to follow. Please do a written human model tutorial.

1 ^ | v Reply



Coche

8 years ago



Thanks for tutorial Karan!! I've really enjoyed and learned a lot :)

Is my first time modeling such a cool and impressive thing like this. At first I thought I would not be able to do it, because I'm not that good at Blender yet, but you really explained very well, and the screen captures were really helpful too.

Thanks again and best regards,
Cochesaurus

1 ^ | v Reply



Chandan Kumar

8 years ago



very Nicely Made! Useful for all kind 3d apps. users!! Keep it up Karan!!!

1 ^ | v Reply



Dean Reaver

a year ago



Very useful, Best tutorial I've ever seen on this.

[View](#) – uploads.disquscdn.com

[View](#) – uploads.disquscdn.com

^ | v Reply



komrath

4 years ago



Great tutorial, thank you for sharing, especially the part where you do all the "sockets" (this seriously gives me chills every time I have to do that, and all my geometry breaks, since I'm still a noob :D)

^ | v Reply



João Melo

4 years ago edited



can you make a tutorial with this photo? the body is not so difficult but the head oh my god!! help me please!!

[View](#)

^ | v Reply



Dan

5 years ago



hey thanks this was also my first blender project. I tried my best it took me one week. I would love to learn more. any suggestions where I can learn more rasbaja@gmail.com

^ | v Reply



sdfxcv

5 years ago



I will now try this

^ | v Reply



Guest

5 years ago



At last I've tried myself in Blender. And I just can't put myself through its horrible (to my taste) interface: the simplest of tasks requires 3 keys to be pressed. 3ds Max's one is 100 times more comfortable to work with.

^ | v Reply



mafon2

6 years ago



Great tutorial, I love low-poly models and dinos. I'm not a 3d-modeler and not Blender-user, but this tut's very encouraging. So I might try in the future.

Thank you for your work.

^ | v Reply

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