

# Modeling a Grizzly Bear

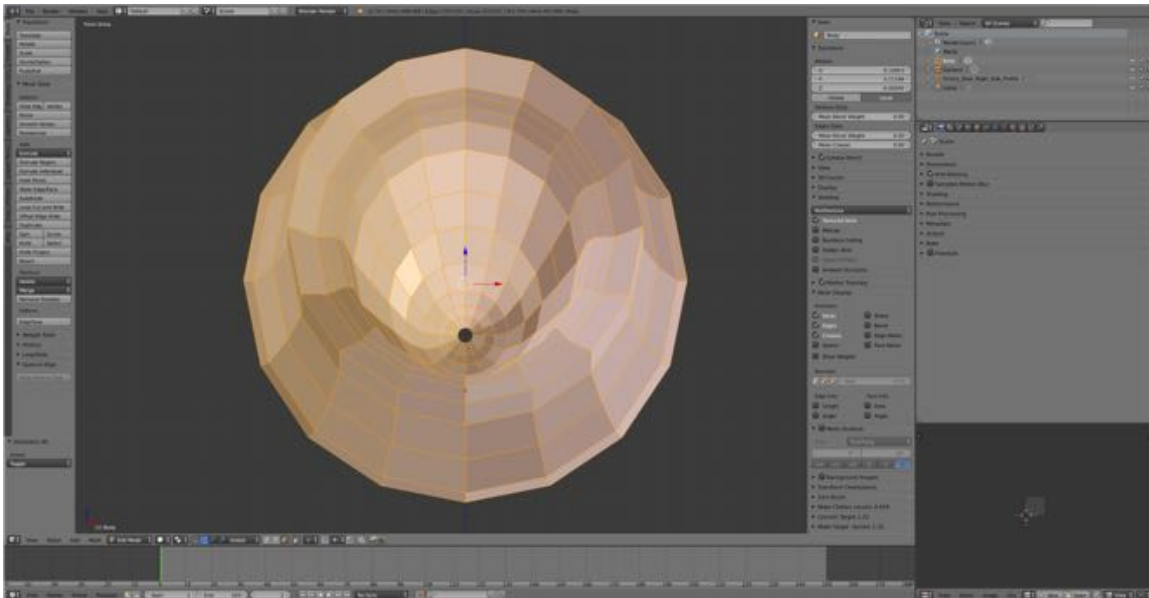
## Step 03

### Modeling - Bilateral (Face)

Next we are going to model the body parts that have a bilateral position, i.e., are present on both sides of the body. These consist of the mouth, eyes, ears and tail. There is, of course, only one mouth and tail but as they fall on the centerline of the body they are the same on both the right and left sides and therefore we only need to model one half. Likewise we only need to model one eye and one ear.

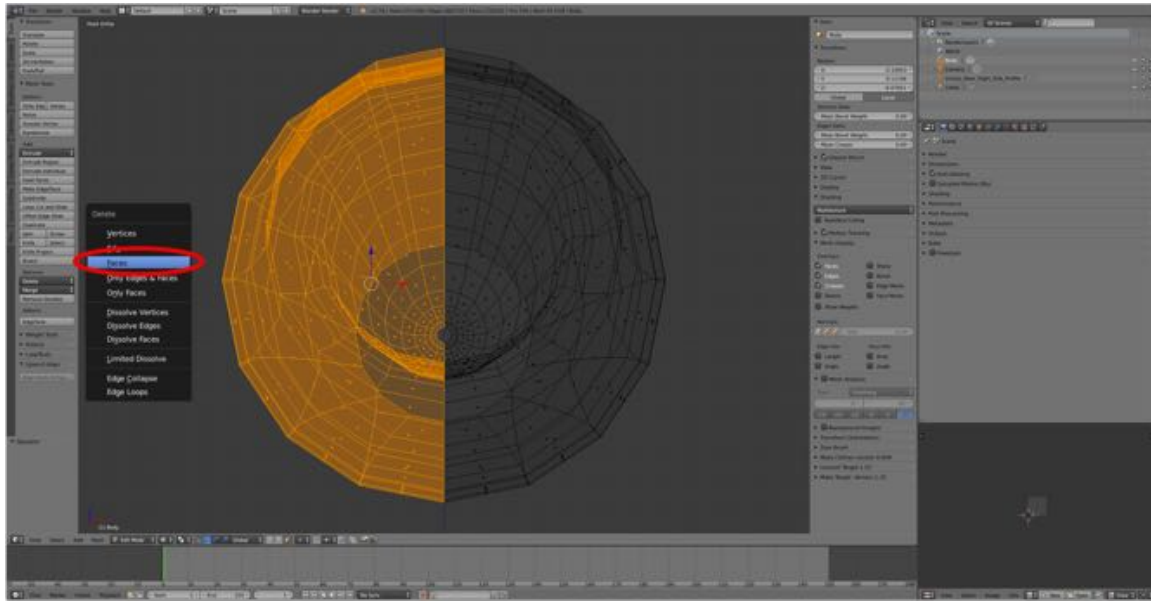
To do this we are going to use a Mirror Modifier (see website). We will keep one side of the body and duplicate it using the Mirror modifier so when we model on one side it will mirror on the other.

- In the **Outline Editor** hide the reference image (**LMB** on the **EYE Icon**)
- In **Edit Mode** switch to **Face Selection Mode**.
- Press the **NUMPAD-1-KEY** to switch to **Front View**, select the model (**A-KEY**), center (**NUMPAD-PERIOD-KEY**) and enlarge (**NUMPAD-PLUS-KEY**) to fill the workspace.



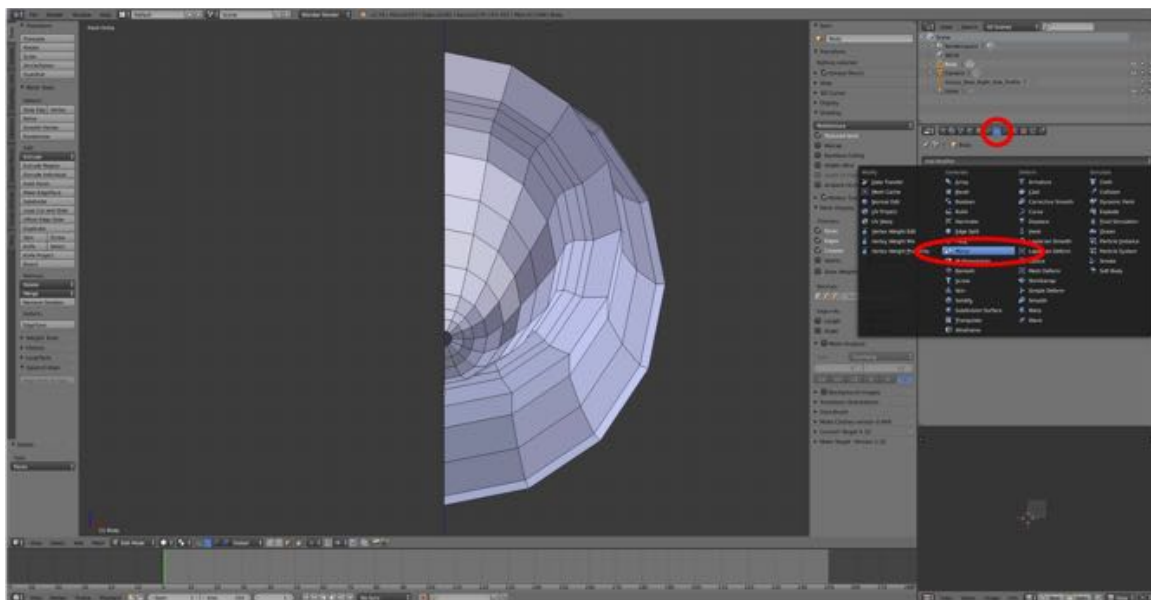
572

- Deselect the model (**A-KEY**) and switch to **Wireframe View Mode** (**Z-KEY**).
- Box select (**B-KEY** > Drag) the left side of the model.



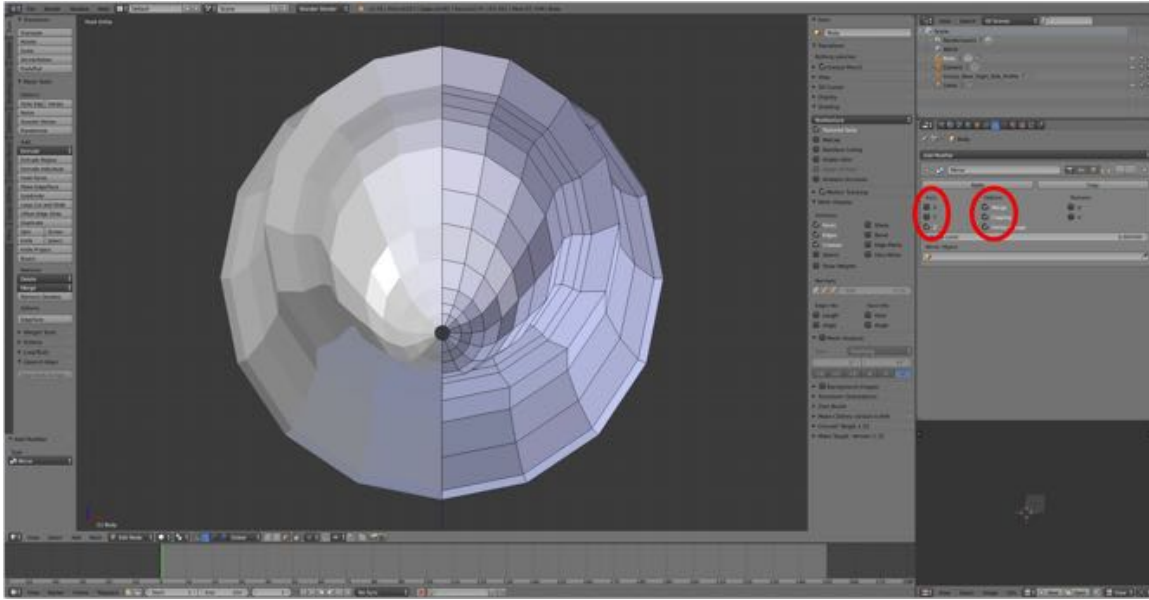
573

- **Delete the left side (X-KEY > Select Faces) and switch back to Solid View Mode (A-KEY).**
- **Position the 3D Cursor at the origin (SHIFT + C-KEY).**
- **In the Properties Editor Header select the Modifier icon (a wrench), select Add Modifier and under the Generate Column select Mirror.**



574

- **Under Axis deselect (uncheck) the X-axis and select (check) the Z-axis.**
- **Under Options select (check) Clipping.**



575

Now any changes we make on the right side of the model will be mirrored to the left.

Save your work.

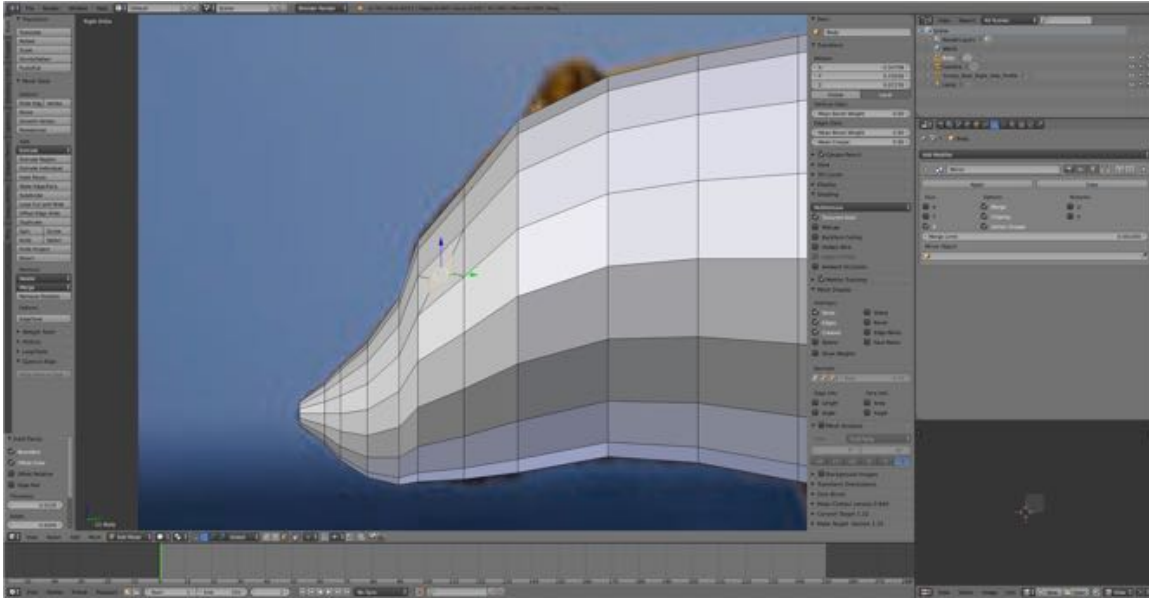
- **Save a copy of the Blender file (SHIFT + CMD + S-KEY and NUMPAD-PLUS-KEY to incrementally increase the file number to “GrizzlyBear04.blend” and LMB click Save as Blender File.**
- **Save a screenshot (Information Editor > Window Menu > Save Screenshot).**

Now lets model the eyes. There’s something about having the eyes in place that “brings the model to life”. We’ll first start to create the eye socket then add a UV sphere for the eye ball then adjust the eye socket around it.

- **Switch to Right Side View (NUMPAD-3-KEY) and bring the reference image back into view (Outline Editor > LMB Eye Icon beside the image).**
- **In the Outline Editor select the image (LMB click on the orange triangle) then toggle the body into and out of view (LMB Eye Icon beside the Body object) to locate the face under which the eye is situated.**

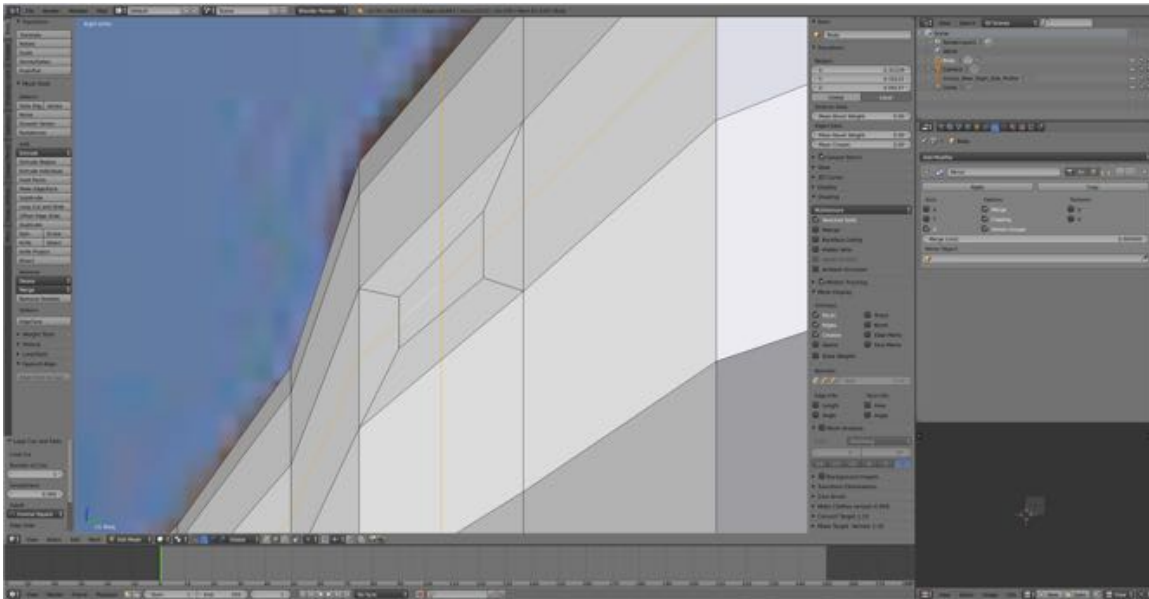
Now what we need to do is add some geometry so that we can mold the eye socket.

- **Select (RMB) the face and inset (I-KEY) a ring of edges in the face.**



576

- Now add two edge loops, one horizontally and one vertically through the face.

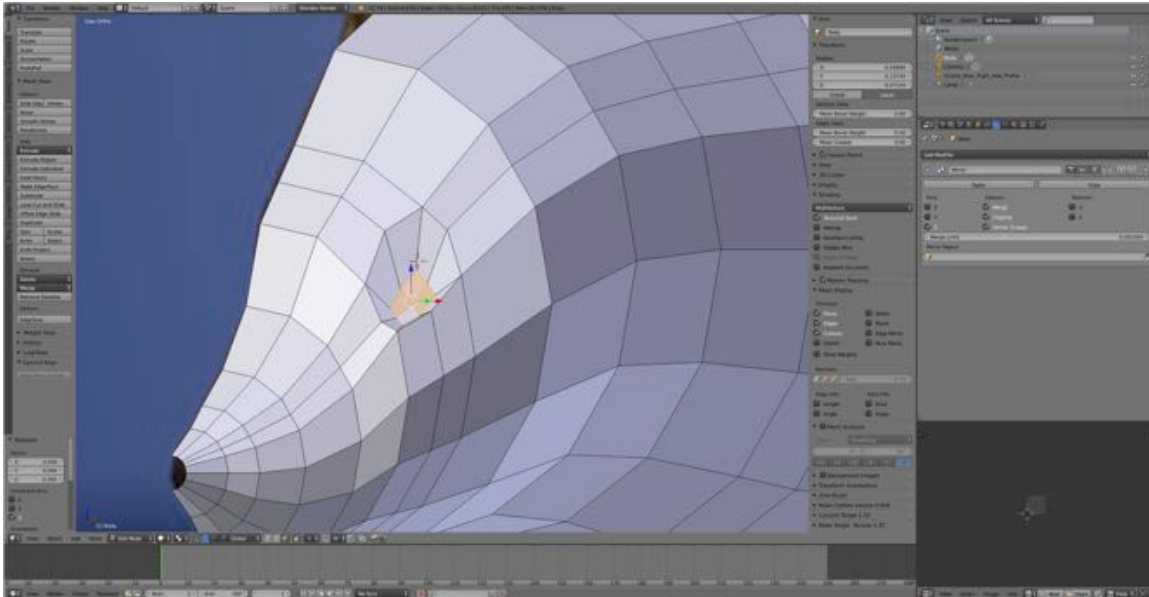


577

Now we begin a necessary part of organic modeling – vertex pulling. This can be facilitated by using Transform Manipulator Widget but it still can be a little tedious. On the other hand, this is what modeling is all about – right? RIGHT!

- In **Face Selection Mode**, select (**RMB**) the **center four faces** and **move downwards** on the Z-axis.
- **Switch to Vertex Selection Mode** and **select vertices** and **move** them to shape the eye socket.

What you are trying to achieve is something like this:



578

The Grizzly bear doesn't have the eyes inset by too much. They also tend to look small and "beady".

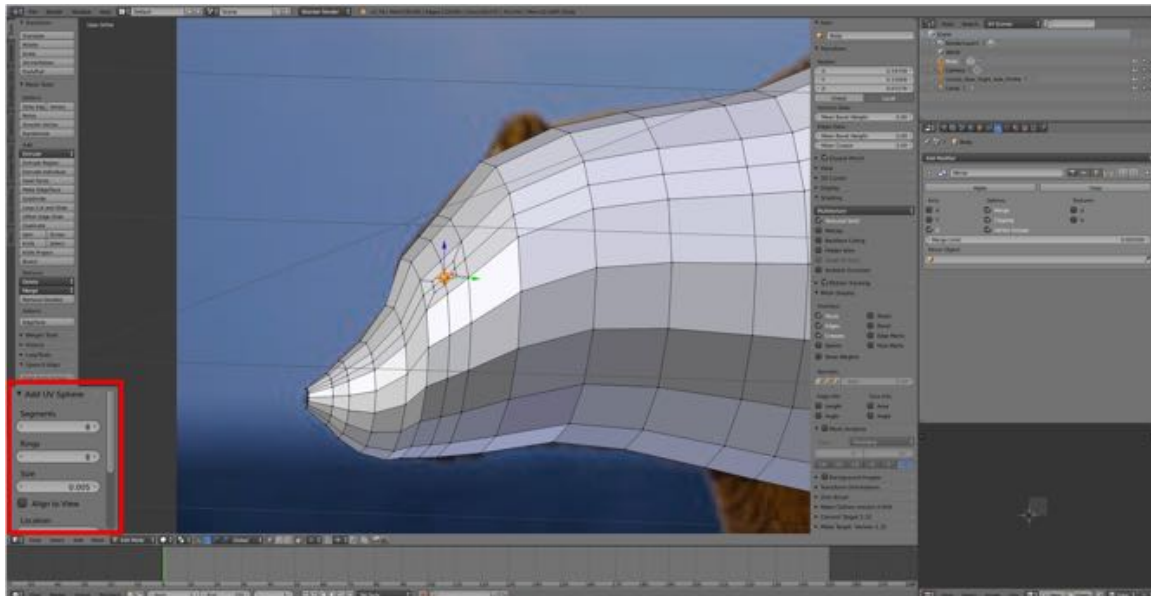


557

Let's try adding in the eye to help with perspective.

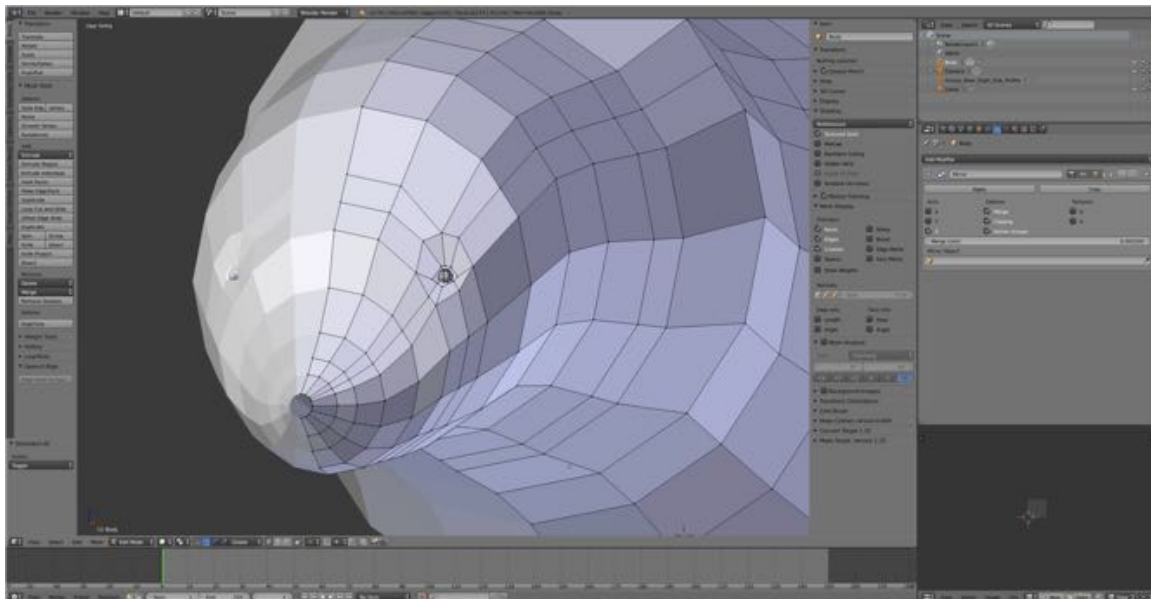
- In **Vertex Selection Mode**, select (RMB) the center vertex and move the **3D Cursor** to the selection (**SHIFT + S-KEY** > select **Cursor to Selected**).
- From the **Add Menu** select **UV Sphere** and in the **Tool Shelf's Operator Pane**

**set the Segments to 8, the Rings to 8 and the Size to 0.005.**



579

- Continue shaping the eye socket until you are satisfied with it.



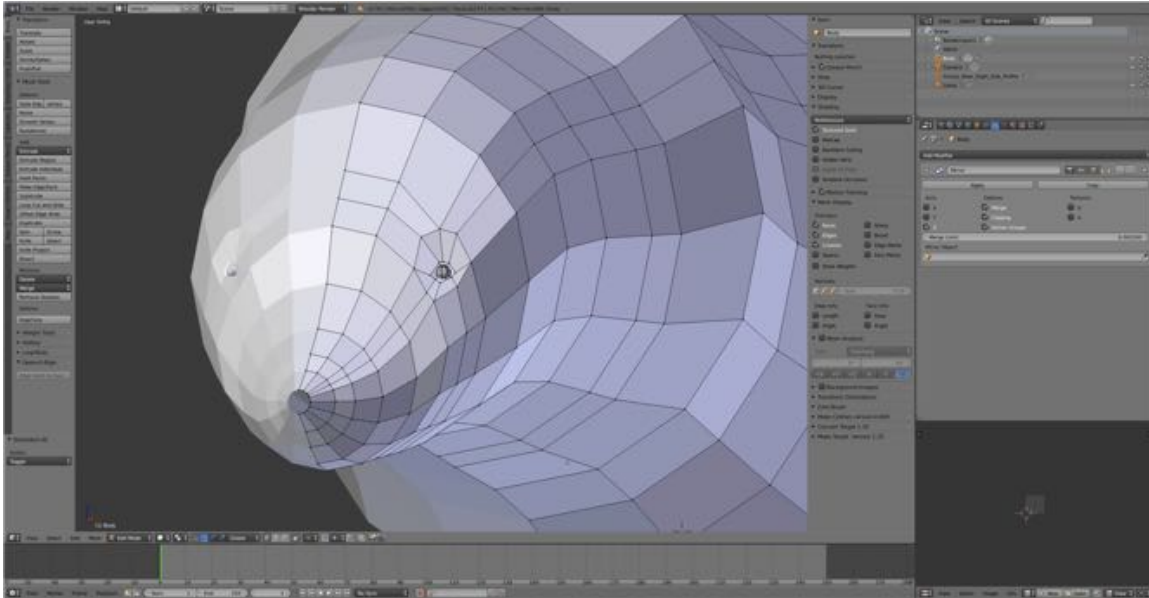
580

This might be a good point to save your work.

- Save a copy of the **Blender file** (**SHIFT + CMD + S-KEY > NUMPAD-PLUS-KEY > LMB Save as Blender File**) (**GrizzlyBear05.blend** if you have saved the same number of times as I have).
- Save a screenshot (**Information Editor > Window Menu > Save Screenshot**).

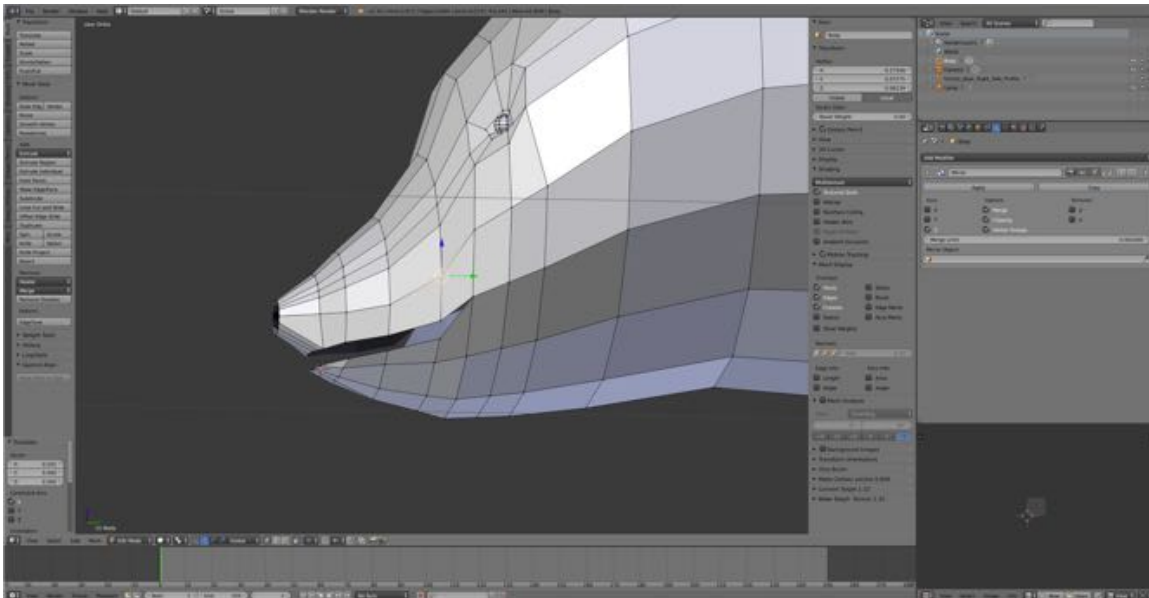
Let's work on the mouth. Here we will use the Rip Tool (see website) to separate the lower jaw and then move it down a bit. We'll adjust the upper jaw then fill in the mouth.

- **Select (RMB)** a line of **vertices** representing the mouth and **press the V-KEY** to separate them and **drag down** a bit.



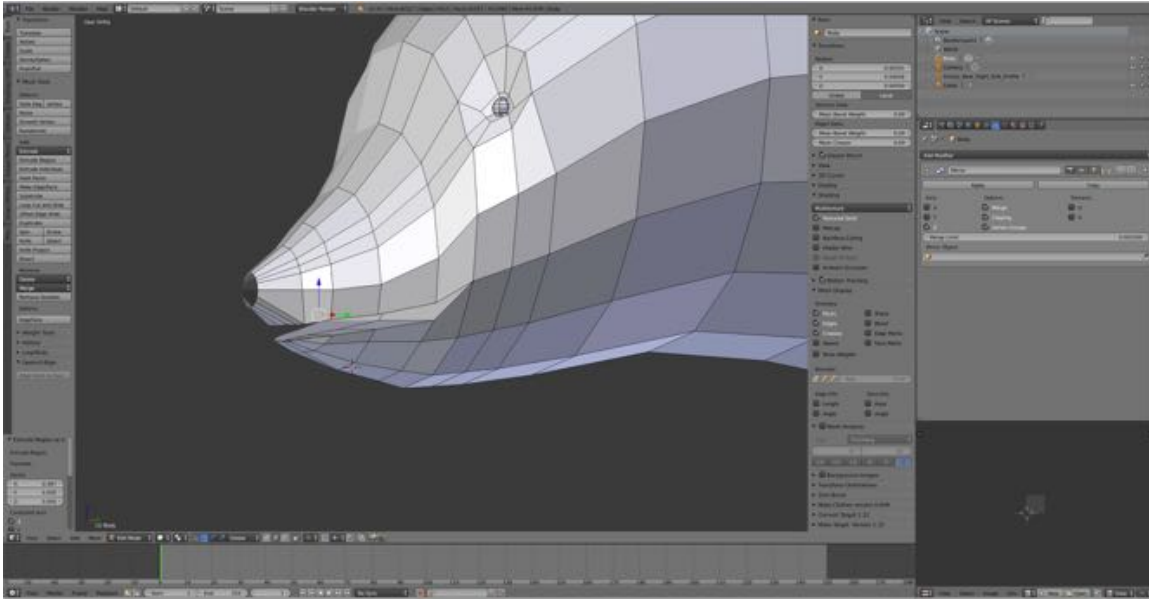
581

- **Pull vertices** to shape the upper and lower jaw.



582

- **Switch to Edge Selection Mode**, select the **edges** of the mouth and **extrude** on the **X-axis** to fill in the inside of the mouth. (With Clipping turn on (checked) in the mirror modifier the edges will meet on the centerline.)



583

Save your work.

- **Save a copy of the Blender file (SHIFT + CMD + S-KEY > NUMPAD-PLUS-KEY > LMB Save as Blender File) (GrizzlyBear06.blend if you have saved the same number of times as I have).**
- **Save a screenshot (Information Editor > Window Menu > Save Screenshot).**