



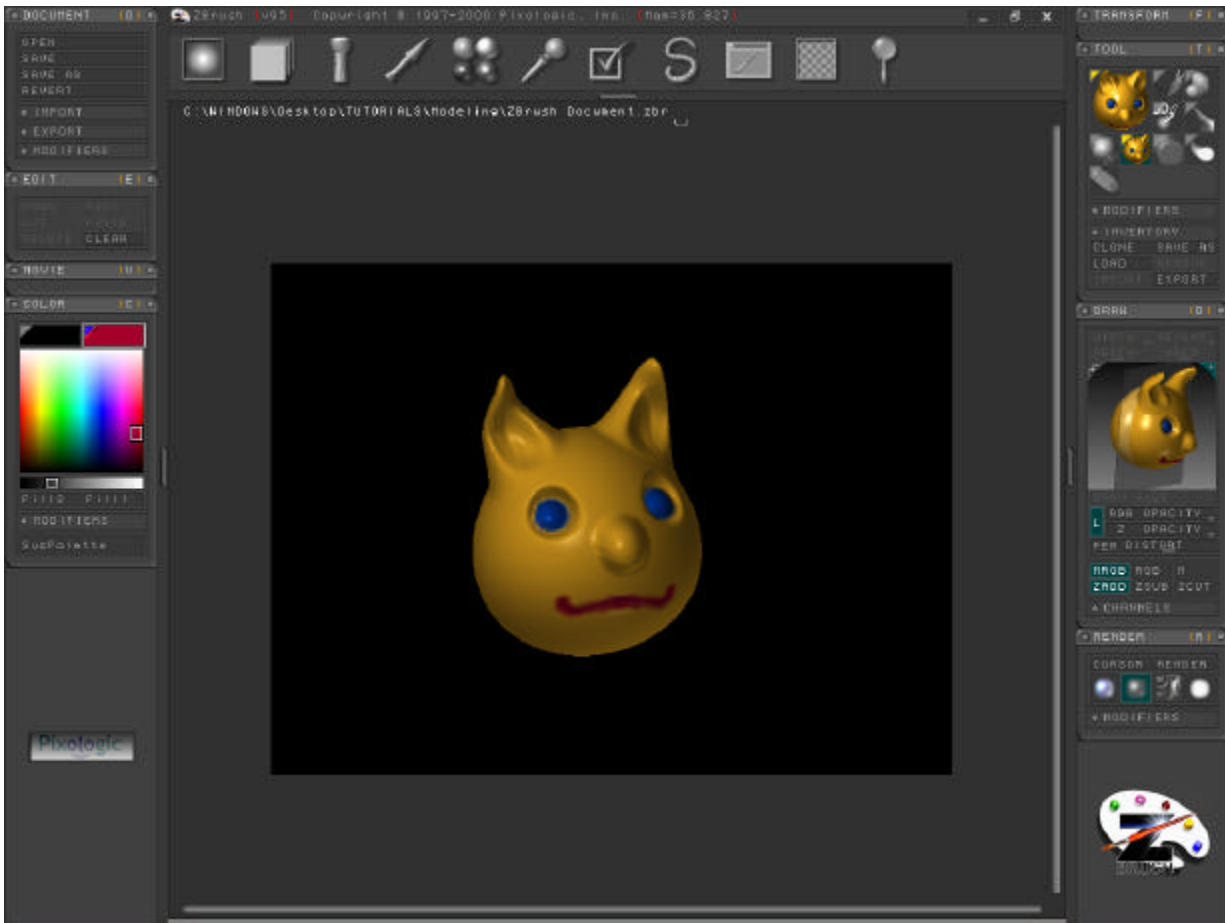
# Modeling Basics Tutorial

ZBrush v0.95

Rev B

Pixologic™

# Modeling a Head



**Written by:**

**Gary Nelson**

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**336 West 31<sup>st</sup> Street**

**Los Angeles, CA 90007**

Phone (888) 748-5967

## About the Demo Software and Tutorials

The demo software is intended to give you a “taste” of the ZBrush concept. There is no Import/Export, Save , or Print capability. (You can however, save your files using the native .zbr format). Even with some other functions disabled, you will experience the power and ease of use inherent in the program. As in all paint programs, you will have the most artistic control by using a stylus and pressure sensitive tablet. Make sure you are using the most recent “build” of the demo. Updates are available on our website.

This Tutorial is intended to give you an overview of the application. Many of the “deeper” controls and capabilities are not explained here.

We will be constantly adding Tutorials, Examples, and Objects to our website.

## GETTING STARTED

### THE SCOPE OF THIS TUTORIAL

The purpose of this tutorial is to introduce you to some of the tools and techniques used in ZBrush to produce objects for export, or to be used in ZBrush scenes. Modeling in ZBrush is much like sculpting with clay. In fact, because of the Undo and Symmetry controls, it is easier!

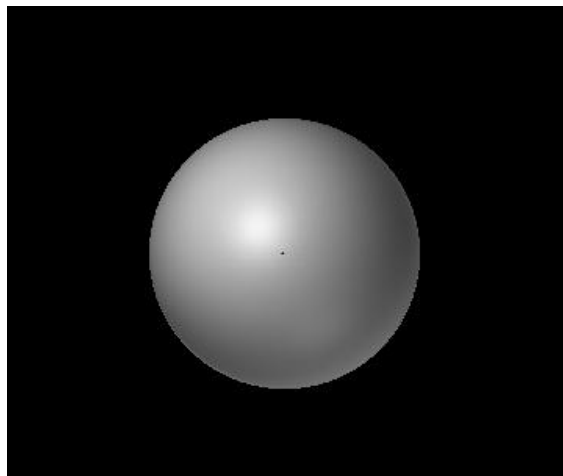


### THE TOOL MENU

In the Tool Palette, choose Tool/Sphere 3D. For modeling heads, its best to start with a 3D sphere and then edit its shape.

### MAKE THE SPHERE

In the work area, click in the center, and then drag straight down to produce a 3D sphere. This will produce a sphere aligned facing you. If you make it off center or the wrong size, simply Undo (cntrl-Z) and try again. ZBrush has 32 levels of Undo and Redo (cntrl-shift-Z).



## THE EDITING TOOLS

### ABOUT HOT KEYS

Move the cursor over the Edit button in the Transform window. After a few seconds, the name of the function appears, along with a Hot Key shortcut in red parenthesis, in this case the letter “T”. If you now press the control key, a more detailed description of the function appears. Pressing the letter “T” has the same effect as pressing the Edit button.

### THE TRANSFORM TOOLS



If the Transform palette is not visible, press the transform icon on the icon bar.



Now that you have a sphere object in the workspace, press Transform/Edit (or just press the letter “T”) to enter the Edit mode.

Notice that the Depth and Color Items are no longer greyed out. The Depth slider ranges from +100% to -100%. The Color slider ranges from 0 to 100%. The values can be set by manually moving the slider or clicking on the slider, then keying in the numerical value desired. When the Depth slider is set to a positive value, it will pull selected areas of the object being edited. If it is set to a negative value, it will push. The Color slider determines how much color is added when editing.

### EDIT SIZE

The Size slider determines the size of the area affected when using the transform tools. The value may be set by sliding or keying in, just like all the sliders in ZBrush.

## MODELING A HEAD



TURN ON SYMMETRY

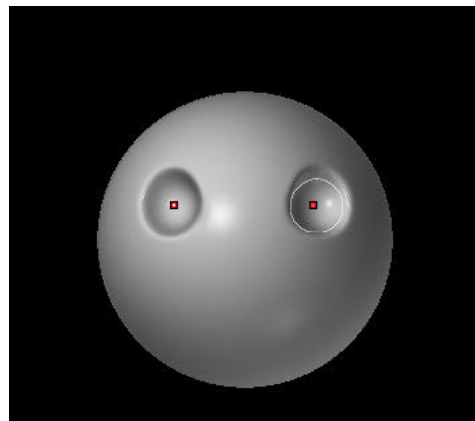
In the Tool Palette, turn on Modifiers/symmetry/x. This causes the editing tools to act in a symmetrical manner over the x axis. Since faces are symmetrical left/right, and this symmetry is relative to the object, not the view, this is a great modeling feature.

FIRST, THE EYESOCKETS



Set the Transform Depth to -25 to push in and the Edit Size to 20 to set the size of the sockets. Move the cursor over the sphere and you will see two red dots. These indicate where the edit action will take place. If they are not perfectly aligned, don't worry, it's because you did not pull down perfectly straight when you made the sphere. Go ahead and place them where you want eyes and click, then drag in small circles. Remember, you have Undo and Redo to give you as many tries as you need.

Now you have some eye sockets, but they might not be aligned perfectly. Notice that if you click and drag anywhere in the black, you can rotate the head to any angle. If you rotate, and then hold down the shift key, you can snap to the next 45 degree increment. Snap the head to look straight at you.

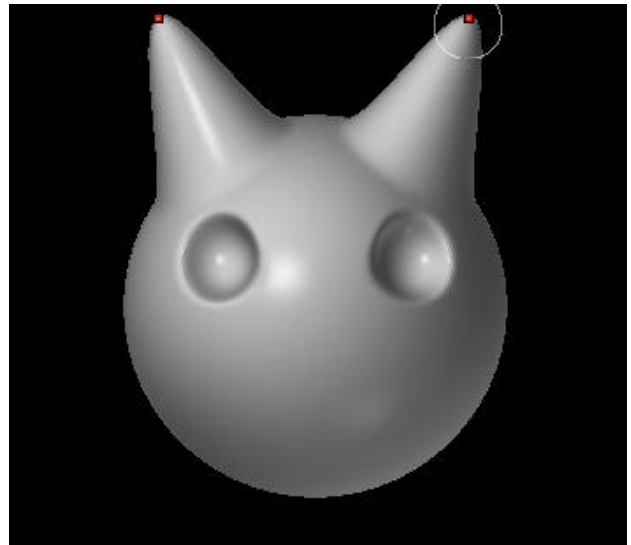




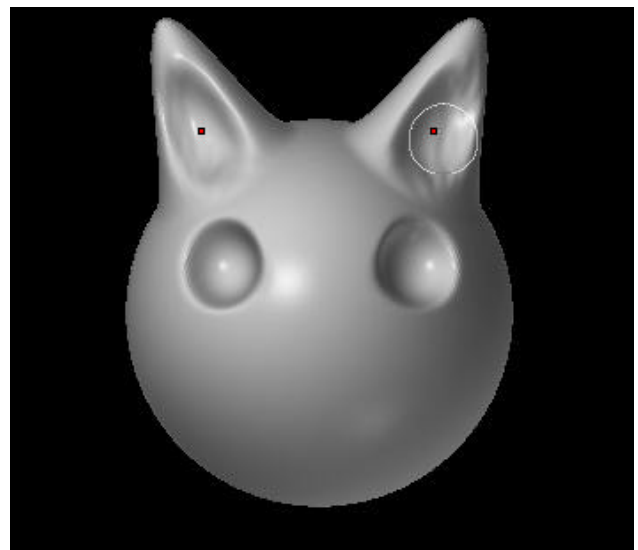
## ADD THE EARS

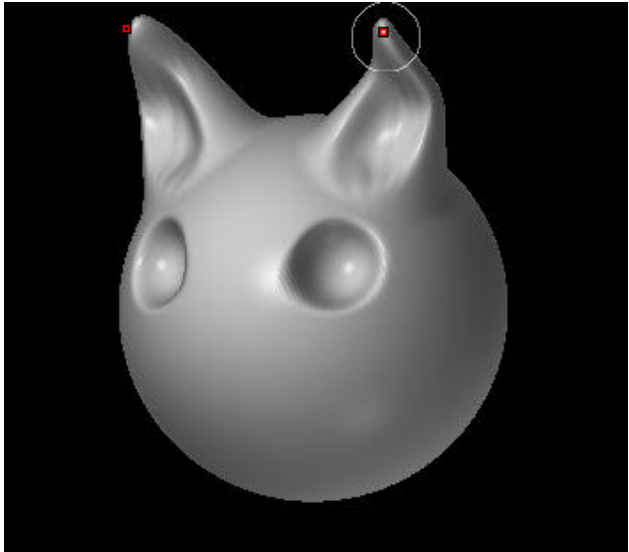
In the Transform Palette, choose the Move icon(or just press the “W” key).

Position the cursor over the sphere to put the 2 red dots where you want the ears and click and drag out.



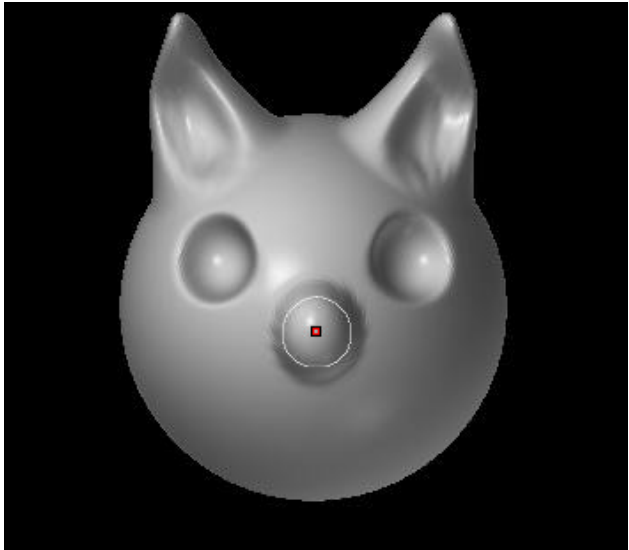
Now set the Transform icon back to “Draw Pointer” or press the “Q” key). Set the Transform depth to -25 and hollow out the ears..





You can freely move the head by clicking and dragging anywhere in the black area. Position the head so that you can see both ears well.

Set the Transform icon back to “move object” (W), grab the tips of the ears and move them forward.



## THE NOSE

Set the Transform icon back to “Draw Pointer” or press the “Q” key).

Now set the Transform Depth to 15, the Edit Size to 20, turn symmetry off, and draw the nose.





## COLOR FILL

If you do not see the Color Palette, press the Color icon to access the Palette. Choose a brown color. Set the Color slider on the Transform Palette to 75. Press fill 1 at the bottom of the palette. Now the color will fill the object at 75% opacity and you can paint on it with the Edit tool.



## EYEBALLS

Turn the symmetry back on and make some eyes. Set the Transform Depth to 25, the Transform Color to 25, and the Edit Draw size to 15. Set the Color picker for a nice blue and draw in some eyes.

Notice that you can sculpt and apply a color at the same time. If you wish to just paint on an object, set the Transform Depth to 0, and the transform color to 100 to be completely opaque. Set the Color to less than 100 to decrease its opacity.



## SMILE

Set the Transform Depth to -5, the Transform Color to 25, and the Edit Draw size to 8. Set the Color picker for a dark red and draw in the smile.



## APPLY A DEFORMER

Of course, heads are not often perfect spheres. One way to change the entire model is to apply a Deformer to it. By adding 20% gravity, the geometry is pulled downward resulting in a more pleasing shape.





## SAVE OR EXPORT

In the Demo software, you may save as a ZBrush scene file (.ZBR). The object will be converted to Pixols and may be reopened at a later time, but will no longer be editable geometry.

When you create an object in ZBrush, a new tool is created. In the Retail version, you can save the tool by choosing Tool/Modifiers/Inventory/Save As. It will be saved in the .ZTL format and can be reloaded at any time by going Tool/Modifiers/Inventory/Load.

Also in the Retail version, you may export the object for use in other 3D programs as an .OBJ file. Choose Tool/Modifiers/Inventory/Export. We are considering other export formats to support.



So...you have seen the basics of how to model in ZBrush. The example given was deliberately simple. There are .ZTL objects for you to download on our website. And here is an example of what is possible. She is a work in progress at Pixologic.

**This concludes the Modeling Basics Tutorial. We will be adding new tutorials and posting them to our website. We welcome suggestions and constructive criticism, since these will eventually be in the full manual.**

**Please send your comments to [support@pixologic.com](mailto:support@pixologic.com)**

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## Credits

ZBrush was created and engineered by Ofer Alon.

The ZBrush Modeling Basics Tutorial was written by Gary Nelson.

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