

Intermediate 3D Printing: Sculptris



Sculptris brings clay sculpturing into the digital world. Let's get started!

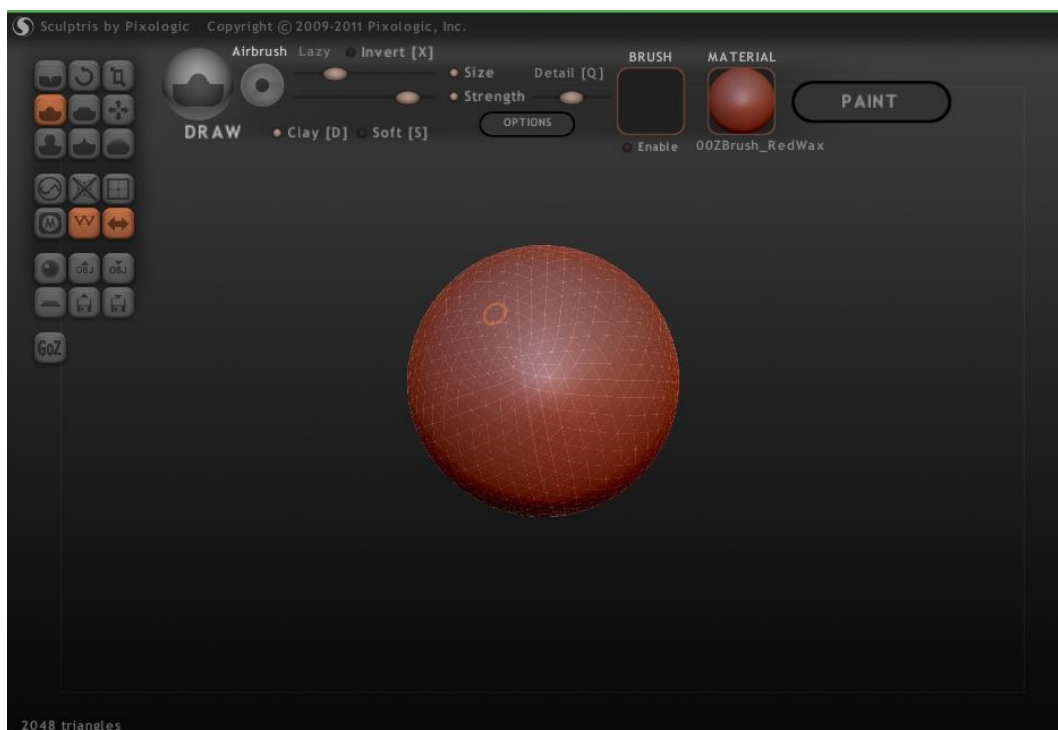
Sculptris Basics

What is it?

Sculptris is a free 3D design software used for creating 3D models. If you have no experience with sculpting or digital modeling, don't worry! Sculptris is great for beginners.

Using the Camera

The hardest thing about 3D design is getting comfortable designing in a three dimensional workspace. To move the camera around your object, *right click and hold moving around*.



Let's try rotating the camera around the starting orb in 360 degrees.

Sculptris Tools



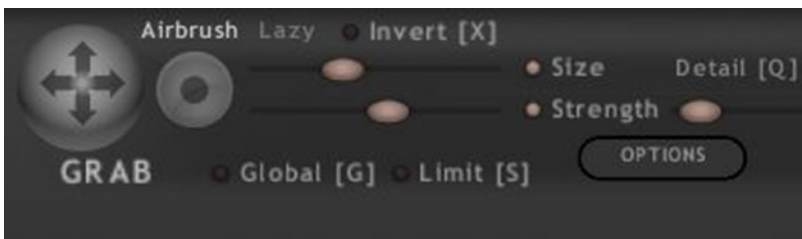
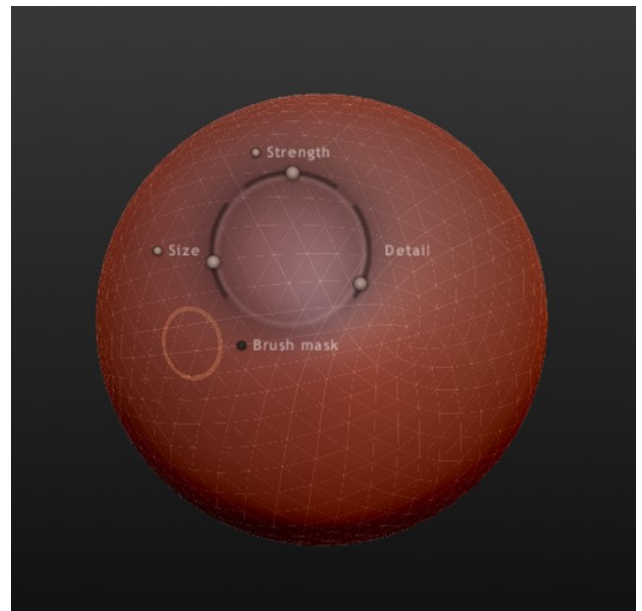
Tools

The majority of this class will cover the individual tools available to Sculptris users.

All of the tools we will be using are located on the left hand side of the workspace. If you're unsure what a tool does, simply hover your mouse over the tool where the name of the tool will show up.

Each tool though can also be adjusted by holding the space bar key. This allows the size, strength, and detail of that tool to be adjust. We'll mostly be working with the size and strength adjusts later in this lesson.

These settings can also be adjusted on the top of the Sculptris window



Today's Sculpture

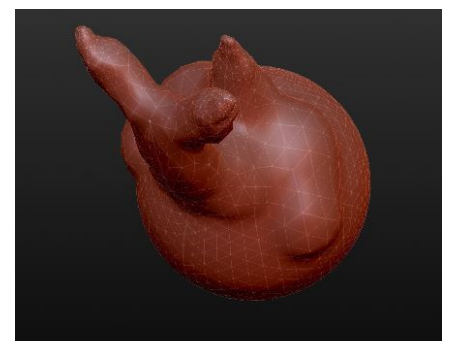
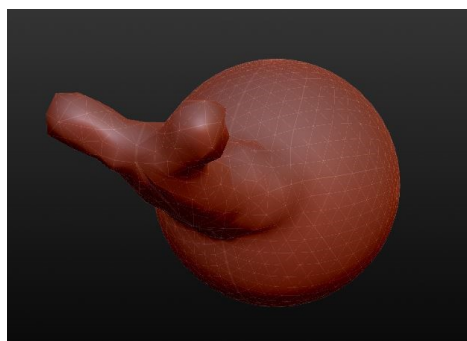
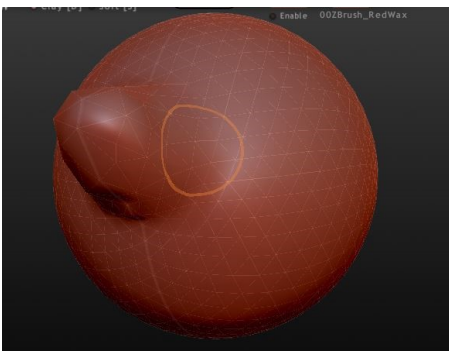
Today we will be sculpting a beetle. Objects that are oblong, oddly shaped, and detailed are much easier to sculpt in Sculptris.



Come back to the picture for reference.

Draw Tools

The Draw Tool adds material to the design we are working on. There are a couple of other ways to add to our model (like the grab tool) but this is the only one that adds additional polygons. To use the draw tool repeatedly tap the mouse to add additional clay.

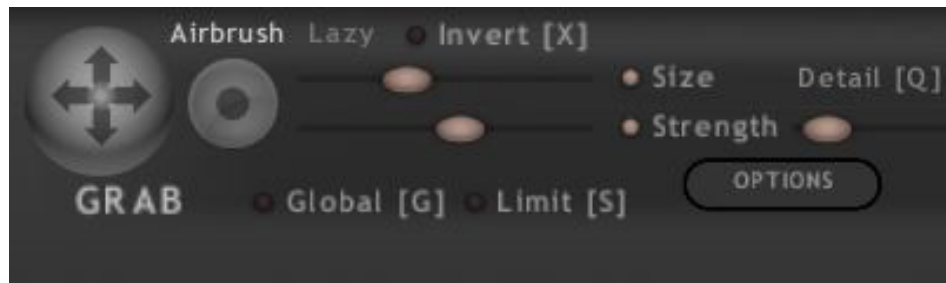


Remember to increase and decrease the size of the tool in order to create horns!

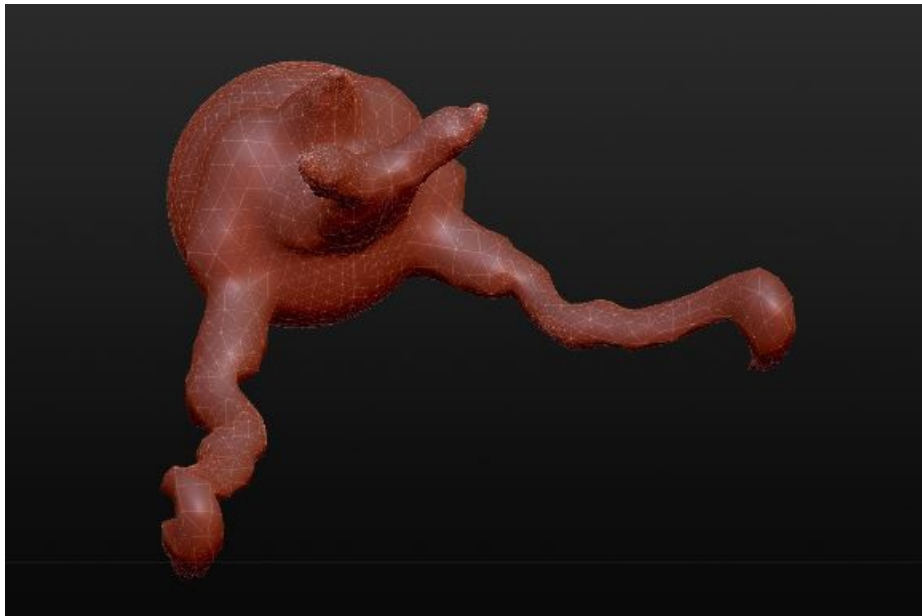
Forming the Beetle

Grab Tool

Now after we have added some arms we may need to move them into correct placement. To move them we'll want to make sure that global grab is not on so that we can locally move our model. Remember that movement is symmetrical!



Let's drag these arms inwards. You may need to increase the brush size to grab the entire arm at the same time.

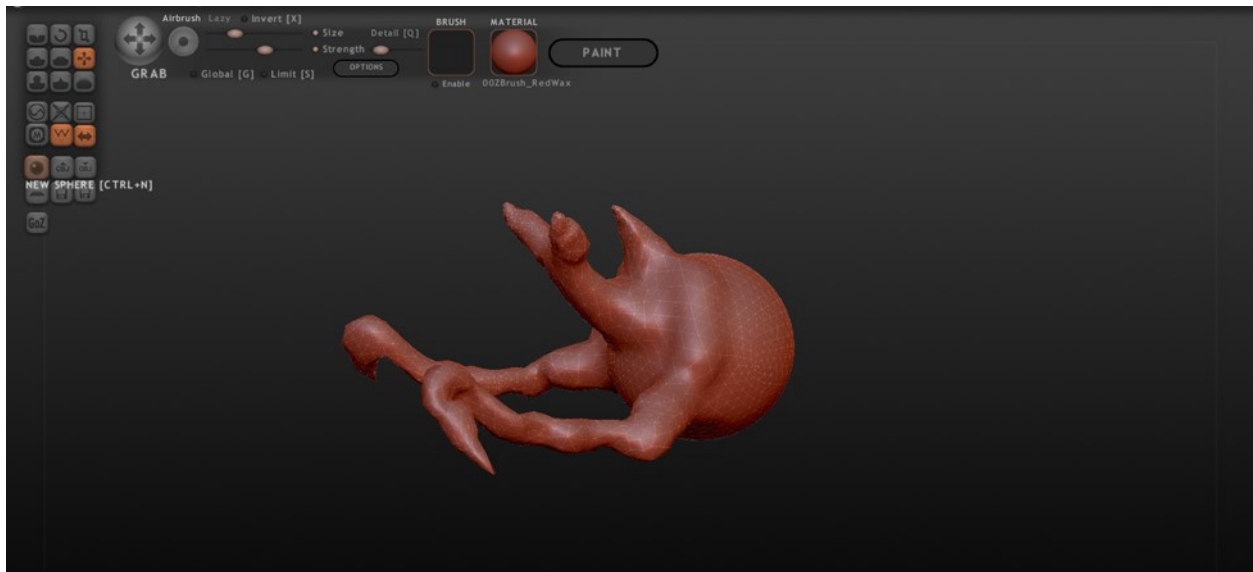


Now that we have a roughed out head and front arms, we will add a back section to the beetle.

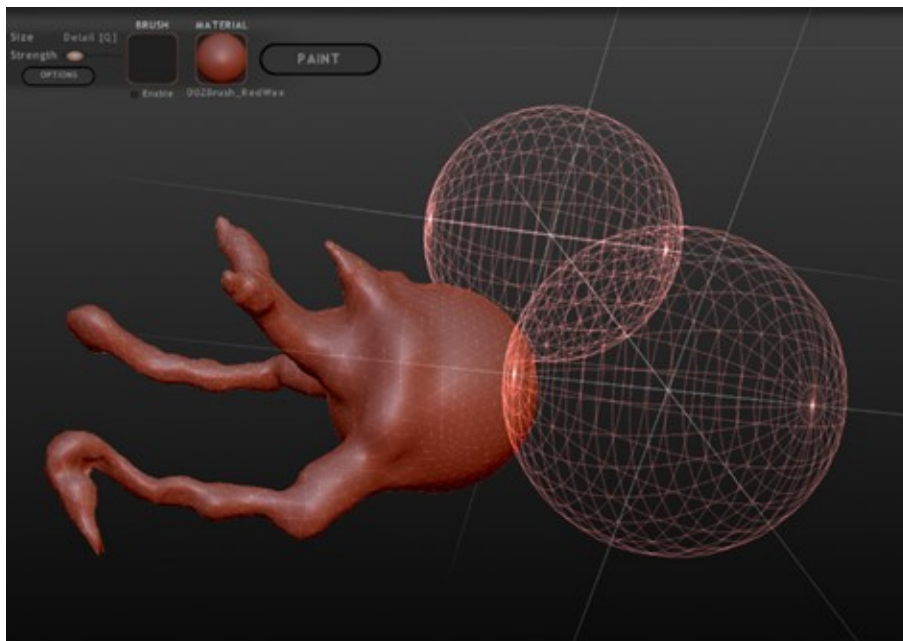
Forming the Beetle

Add Object

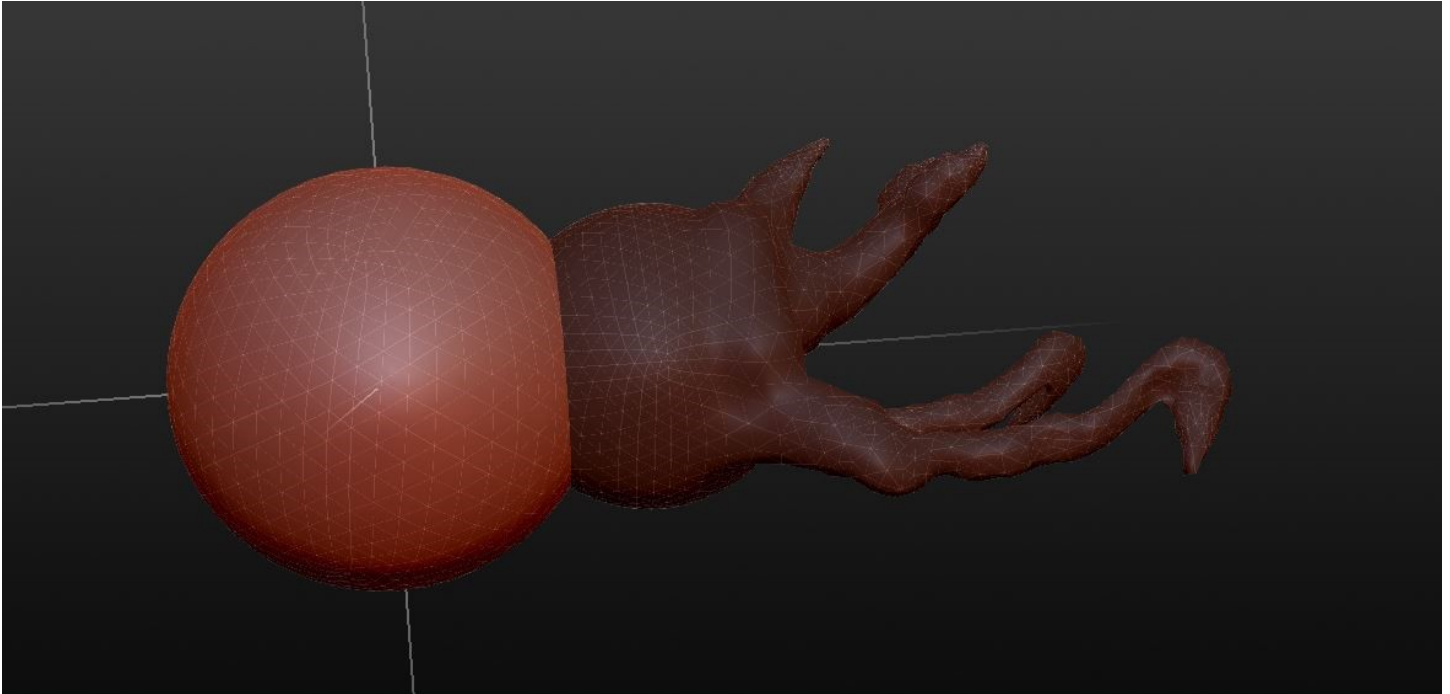
Sometimes it makes sense to segment a design into individual objects.



Because of the symmetrical nature, add object will often try to add two new orbs. So drag these orbs together and hit enter to place them.



Forming the Beetle



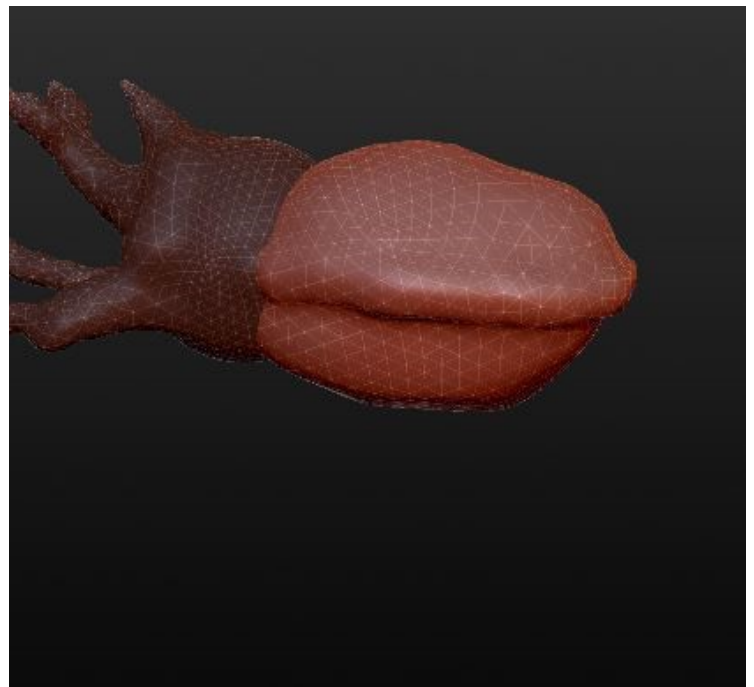
Once we have added the orb, we can use the scale tool to increase or decrease the size. You can do this by dragging left or right.

Crease Tool

The next tool we will be using is the crease tool along with the draw tool. Draw a border around the abdomen section and then go over the added materials with the Crease Tool. This will separate the top of the abdomen and the bottom from each other.

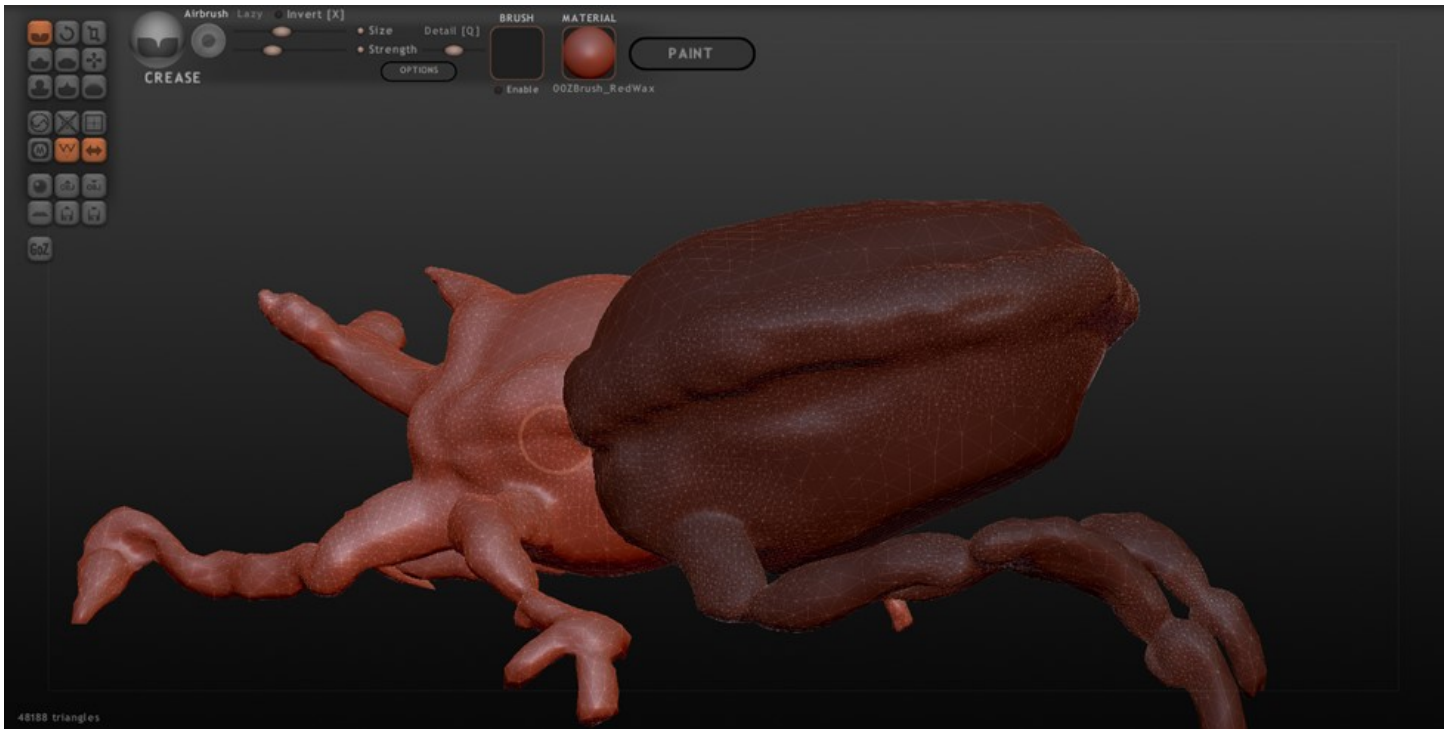
Pinch Tool

Finally, use the pinch tool to separate the two segments a little further. Let's also increase the detail to make the work a little finer.



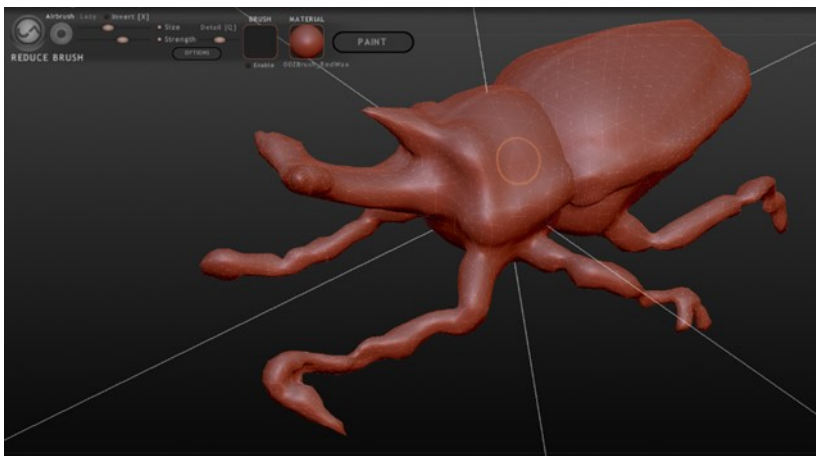
Forming the Beetle

Now let's add an additional pair of legs to make our design really look like a beetle.



Reduce Brush

The final step to printing is using the Reduce Brush. If you are going to 3D print your design, you want to make sure that your polygon count is relatively low. The count depends on what quality of print you are making, how big the design is being printed, and the orientation of printing. That being said we will want to reduce the detail as much as possible without destroying our work.



Repeatedly click to reduce the detail each time you click.

Remember if you reduce too much you can always use CTRL + Z to move a step backward.

Finishing Touches

Saving – If you are still working on your design, or would like to work on it in the future, you will need to save your design. To open your file, click the open button and add the saved object. The file will be opened the same way you add an object.

Exporting – Clicking the export option allows you to export Sculptpris files as Wavefront OBJ files, and ZBrush GOZ files. If you'd like to print your file in Makerbot, you'll need to export it to an OBJ file type.