Finding a Printable File

Our printers require a .stl file to create a 3D model.

1. On a Mac or PC, open Safari and visit either 3dwarehouse.sketchup.com, thingiverse.com, or yeggi.com. Sometimes, a good Google search can't hurt. An example of a Google search for a model might be: "example .stl file". Fill in "example" with what ever it is you're searching for.
2. Search by using the search bar or categories to find an .stl file that fits your needs.
3. If the model you require doesn't have an .stl option, you can upload most types of 3D file formats to 3dwarehouse.sketchup.com to convert them to .stl.
4. Microsoft provides a 3D model repair website at https://modelrepair.azurewebsites.net. You must have a Microsoft account to use this website.
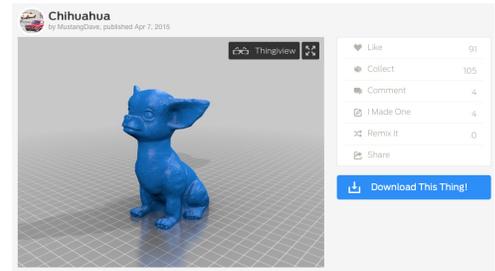
Figure 1

Software for .stl Files

1. The STAC provides AutoCad for architecture students to use. Blender, 3D Builder, and Google Sketchup are great free programs for creating 3D models on either Mac or PC. These programs do not always allow saving as an .stl. If .stl is not an option, most 3D models can be converted by uploading them to 3dwarehouse.sketchup.com.

Downloading Software

Figure 2

1. The STAC does not support Blender or Google Sketchup. In order to use these programs, you'll need to download them to your computer. Luckilly, they are both free and easy to attain.
2. To download Blender, you'll need to visit www.download.cnet.com. Once, there use the search bar to enter "blender". Press the search button, find the link that has a Macintosh logo, if you're using a Mac, or the Windows logo, if you're using Windows. Download from there, and install.
3. To download Google Sketchup, you'll need to visit www.sketchup.com. From there, click on "download Sketchup". In the dropdown menu, choose "educational use". Enter your personal information into the fields, and click on "Download Sketchup". When prompted, make sure you choose "Sketchup Make" and not Sketchup Pro. Download and install from there.
4. Another available software is 3D Builder. This software is free with Windows 10. If you have Windows 10, you can find the software at https://www.microsoft.com/en-us/store/apps/3d-builder/9wzdncrfj3r6.The url for Microsoft 3D scan software can be found at https://www.microsoft.com/en-us/store/apps/3d-scan/9nblggh68pmc.
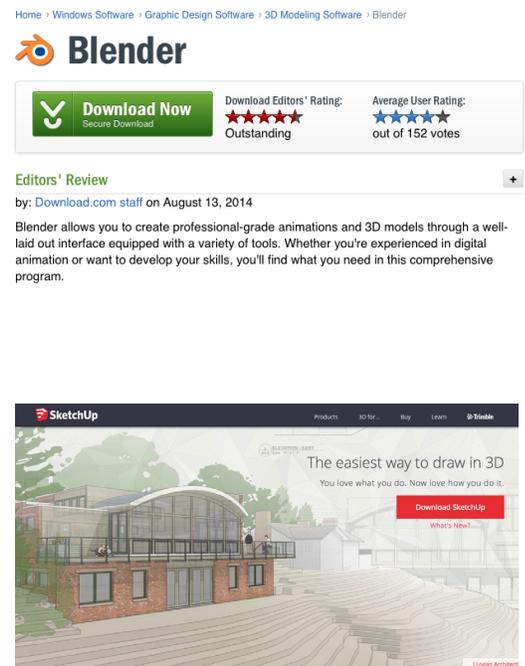
Figure 3

Learning Software

1. Google Sketchup is relatively easy to learn. To get a quick and easy demonstration of the software, you'll want to visit http://www.sketchup.com/learn/videos/58.
2. To learn Blender, check out the back of this page for a quick users guide.

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Learning Blender

When first opening Blender, the interface may seem somewhat daunting. However, do not be alarmed. Getting used to a 3D environment definitely has a learning curve, but it is not impossible! This guide will help you understand the basics of the layout and shortcuts of Blender. If you still wish to learn more, Youtube has many Blender tutorials from absolute beginner to expert. These tutorials range from designing a 3D sphere to animating entire films. That's right, Blender also functions as an animation program, with it's own physics engine. The bottom of your Blender screen has a timeline. This timeline is for animating your 3D creations frame by frame. The rest of the program is layout in the guide below.
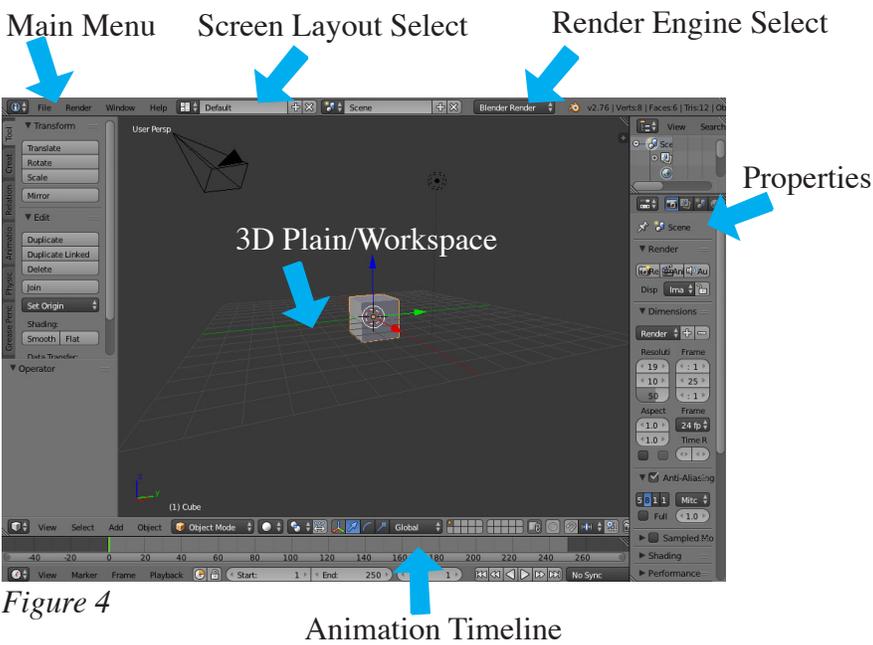
Main Menu   Screen Layout Select   Render Engine Select

Properties

3D Plain/Workspace

Figure 4

Animation Timeline

To navigate around your 3D object, and view it from any angle of your workspace, you can do one of two things. First, if you have a three-buttoned mouse, you can click and hold the 3rd button, or the scroll wheel, then drag around your view. If you do not have a three button mouse, use Alt+Click on a PC or Option+Click on a Mac.

Shortcuts

Figure 5