

# IMPORTING SKETCHUP MODELS

Vectorworks Tutorial by [Andy Broomell](#) © 2020.  
Green text indicates advanced or supplementary notes.

## 1

### OVERVIEW

- In addition to utilizing the Resource Manager to pull objects from the default Vectorworks libraries, premade objects can be found online in the **SketchUp 3D Warehouse**. The filetype is SKP. (You don't need SketchUp to utilize this.)
- Vectorworks allows you to import .skp files directly into Vectorworks. As of VW2020, files made in SketchUp versions 4 through 2019 are supported.
- Texture and texture mapping will be imported as well. Prior to VW2015, only the geometry was imported.
- SketchUp models are created and uploaded to the 3D Warehouse by everyday users, so you have to make sure they are accurate. Don't automatically trust everything from the 3D Warehouse, as there is no oversight to make sure models are well-constructed.
- This tutorial will cover how to choose, import, and clean up SketchUp models to be used as dressing, furniture, etc. in your 3D model. (Don't use this tutorial for importing full set models). This process should be done in a blank file.

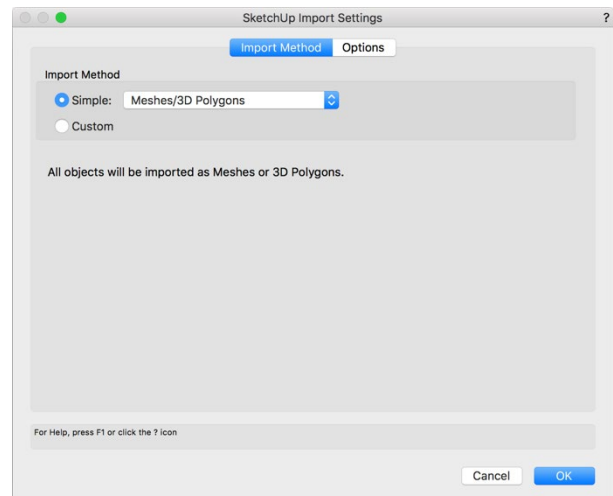
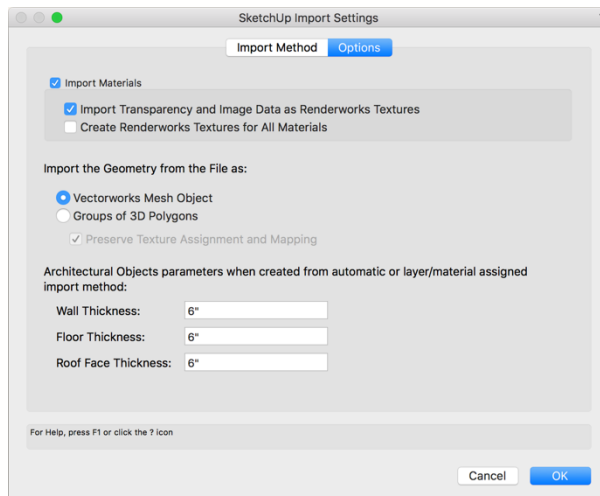
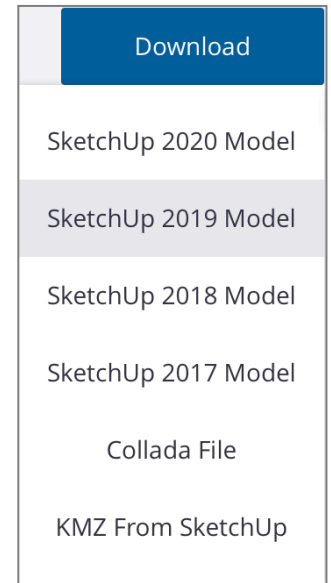


- The first step is to find a model that you want to import.
- Go to <https://3dwarehouse.sketchup.com/> (bookmark this page).
- Enter a **search term** at the top. You may need to try multiple different search terms to find the object you want. While the library is vast, it doesn't have everything.
- When you see an object that looks like it has potential, **click on its thumbnail**. You will be taken to a page for that object which shows a larger picture along with more information on the right (you may have to expand "Model Info").
- Click the "3D model" button to **preview the object in 3D** right in your browser. This is one way to double check what the model looks like before downloading it.
- Another thing to notice is the **number of polygons** that make up the model, listed on the right-hand side. The lower the better.
  - Tens, hundreds, and thousands of polys are generally fine. If the number is hundreds of thousands, make sure there's actually a reason for this much complexity in the object. If the geometry seems unnecessarily overbuilt, try to find a better model. More polygons will slow down your file and render times. Note that you can also filter for complexity on the left side of the search results.

# 3

## DOWNLOADING AND IMPORTING THE MODEL

- When you've found a model you want, click the **Download** button, which opens a flyout menu.
- Download a supported version.
- DO NOT IMPORT this file directly into your Vectorworks project file. Instead, start a new file, then go to File > Import > **Import SketchUp**.
- Choose the file you downloaded and click OK.
- In the pop-up, the defaults are usually correct, but take a look at what the options are.

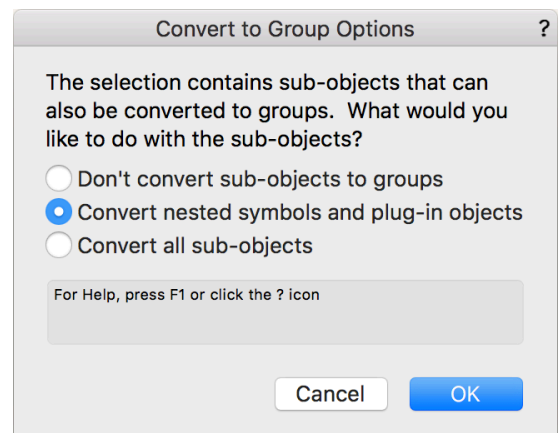


- If the import worked properly, you should end up with the model in your file. Take a look in OpenGL to see the results.

# 4

## CLEANING UP THE MODEL

- It's wise to clean up the model before bringing it into your project file:
- First, go to the **Classes** tab of the Navigation Palette. Select any unnecessary classes that imported with the model and right click, choose Delete, and reassign all the objects to "None".
- Next, go to the **Resource Manager** and make sure the current file is selected. Look to see how many **Symbols** imported. If there aren't any, you can skip to the next page.
- If there *are* Symbols, you usually want to de-symbolize them (unless they're helpful). Because SketchUp files often import with Symbols nested multiple levels deep inside of other Symbols, follow these steps to reliably de-symbolize everything:
  1. Edit > Select All. If the OIP says "3D Symbol", skip to step 3.
  2. Modify > Create Symbol, click OK. [This is temporary.]
  3. With your single Symbol selected, choose Modify > Convert to Group.
  4. Choose "**Convert nested Symbols and Plug-In Objects.**" This searches inside all the nested symbols and groups and turns everything into raw geometry (meshes, in this case).



- **Examine** the model to make sure everything is built correctly. You can **ungroup** things as needed, modify or delete geometry, and rename and modify textures.
- Complex meshes can be reduced with Modify > **Simplify Mesh**.
- Double check that the model was built at the **right size**. Sometimes SketchUp users don't use real-world dimensions and you have to manually scale the model (Modify > **Scale Objects**).
- When the model is ready, you may want the entire thing to be a **Symbol** (unrelated to the temporary Symbol mentioned earlier). Select All, then Create Symbol and give it a proper name. Note the insertion point, especially on Z axis.
- If you need your Symbol to be hybrid (2D & 3D), a quick way is to go inside the 3D component, Select All, then do **Convert Copy to Lines** (Hidden Line Render Mode) while in Top view, then exit the Symbol. This will create flattened 2D geometry. Enter the Symbol's 2D Component and clean up as necessary. Perhaps add a heavier lineweight outline using the lasso mode of the 2D Polygon tool.
  - As of 2019 you can also use the "Generate 2D from 3D Component" right click function, which achieves similar results.
- Copy and paste the symbol into your project file. If you've done all the steps correctly, you shouldn't end up with extra crap in your file.

- **Download SketchUp model.**
- **Import into blank VW file.**
- **Clean up Classes.**
- **Clean up Symbols by turning everything into one Symbol, then Converting to Group (including nested objects).**
- **Double check scale, geometry, and textures.**
- **Create into Symbol.**
- **Copy and Paste into project file.**