



### Designing a sofa in your 3D Model through SketchUp



### DESIGNING A SOFA IN YOUR 3D MODEL THROUGH SKETCHUP

In this article we are going to discuss how SketchUp enables us to furnish our Interiors through live furniture modelling. Furniture is a broad topic; it can be couches tables sofas cushions, beds, cabinets, Roll Top desks etc. Furniture is one of the essential requirements of every home it makes your life simpler and gives you comfort in the house. Comfort is vital for our rest, furniture not only enhances the looks of any home or office but, it also offers the best comfort for rest and relax.



The importance of furniture is felt by everyone. One of the things that complete one's house is furniture. These live load elements become a necessity and rather the most crucial part of designing an interior space. The evolution of furniture from their basic utility to them being a luxury symbol and their beautiful designs are taking a leap in today's world. Furniture brings about changes in the space and its functionality. The range, variety of designs and type of furniture are making every dead and dull area a lively experience.

To incorporate the furniture, say here a sofa in the 3d model, start the base on the ground, by drawing the rectangular components of Sofa in 3 pieces. Create an arc on the corner of the component, use a standard arc to create a perfect arc, now in the middle sections grab the points and do the arc.

### Creating Structure of the Sofa

Double click on both the ends to make it a component and save the diagram, just rotate 90 degrees and select an average looking sofa, make the bottom section 9.5 inches. Now the next way is to triple click to separate the component, make the cushions and arms separately to add details to your work. Draw a reference line and draw a rectangle, just extend the base to 5' and 28" to model the back of the sofa. Double click and make it a component by saving it at the back of the couch.

### Creating the Arm of the Sofa

Click and make the arm by pulling 4 inches and pull it through and make a new component and save it by naming "The Arm".

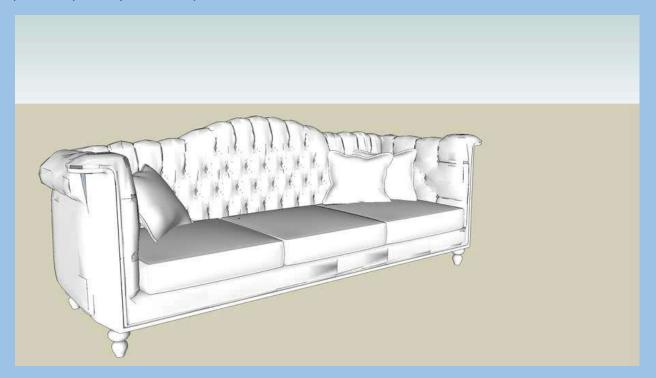


### **Rotate Keys**

When you move you get the rotate keys, scale the components and lengthen the sofa.

The next step is to offset the arc of the sofa by double click and right clicking it, then save the file and name it as back of the middle in front portion and make it a component and save the component by naming it "Bottom of the middle".

Now the initial pieces of the sofa are crafted, and it it's time to take the basic decision, about how much we want the arm hold, back of the chair and other pieces separately or as one piece.



### Add Minute details to the Sofa

The next important procedure is to explode the sofa in per piece, so that the minute detailing

can be done. Add on the cushions on the sofa by putting 4.75 inches, make it as a whole component by saving as side cushion1.

### **Add Cushions**

Repeat the steps by adding the cushions on the sofa make it as a whole component by saving as side cushion2. Explode the arc and, triple click it on one component, grab the surface by clicking Control + C. Push Pull to the cushion height and save it as component Cushion Middle.





Customise the default tool bar, the best function in Sketchup is one customise the design of the furniture's. Now add in the cushions, make a 4-inch cushion and pull it up press it 2 inches into the back of the crowd. Triple click and make it a component and save it as side back cushion 1. Next step is to Push/Pull and extend the cushion triple click and make the component side back cushion 2. It's time to soften the edges of the cushions.







### FredoCorner

FredoCorner performs the rounding of the edges and corners of 3D shapes along a 2D profile, in 4 modes: Round, Bevel, Subdivision Mesh and Chop Corner. FredoCorner also includes a Repair tool to undo any generated shape rounding.

Go to the tool pallets and then go to FredoCorner. The use of FredoCorner is to take the geometry and helps in rounding the corner. Fredo corner acts as a follow me tool. Now take the second cushion and soften every single edge by using FredoCorner.

### Adding Texture to the Sofa

SketchUp has a unique specification, if you want to add on texture to your furniture you can do that by selecting the texture button.

### Creating Legs for the Sofa

Draw the legs of the sofa 3X3 inch square and add on the geometry, make it component and save it as a foot. Copy it on four sides of the couch, and then add four more legs on the arc of the sofa. Copy the foot and add on the extension of the sofa, so now the sofa has got its legs. Basically, sofas with legs allow people the advantage to stoop down less, making the act of sitting less strenuous, especially for individuals with leg, hip, or back injuries, or for the elderly.

### Adding Materials on the Sofa

In SketchUp we can Revamp the furniture by changing the colour of the fabric texture of the cushions and also one can add cup holder to the arm of the sofa.

SketchUp's work area is a window into a three-dimensional world where one can build just about anything. It can be as big as the Empire State building or as small as an iPod. By using SketchUp just design the house inside and out, and build all the furniture for each room.



### **UV MAPPING FOR SKETCHUP**

### Some tips and Plugins to resolve that Tutorial Basic Level

IF you want to apply some Materials & Textures over GeometryinSketchup, you can find sometimes some problems. (Because the complexity of the-geometry or others Parameters ). So to resolve that, you can use some Plugins to do in order the :""UV Mapping""! adding these elements to your Sketchup program. The best way tounderstand that is see the Videos for each plugin. There are different options, with different Plugins:

### 1. "Thru Paint Plugin" by Fredo

o Where: Sketchucation.com

o Price: Free

o Plugin author: Fredo

### (Apply Materials in a good way for Renderings)

- --You need to install some Fredo Tools & Fredo-Library too.
- Thru Paint is into Fredo Tools Plugin!--.
- o But that is highly recommended!.

### Youtube Video by 'The Sketchup Essentials':



### 2. Wrap-R for Sketchup

(You can see some info over these Plugin by Chipp Walters-video tutorial).

Site plugin: www.wrap-r.com

**Price: +-75**\$

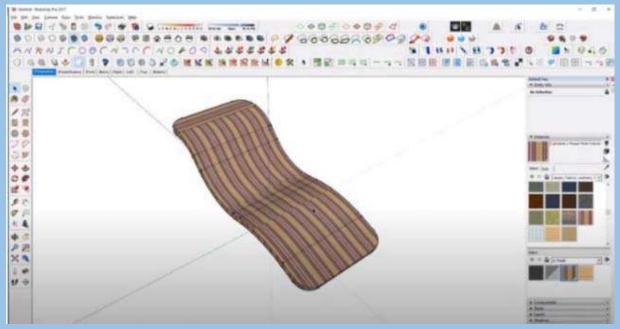


\*Video: https://www.youtube.com/watch?v=5a9kaaaTp5Q&feature=youtu.be

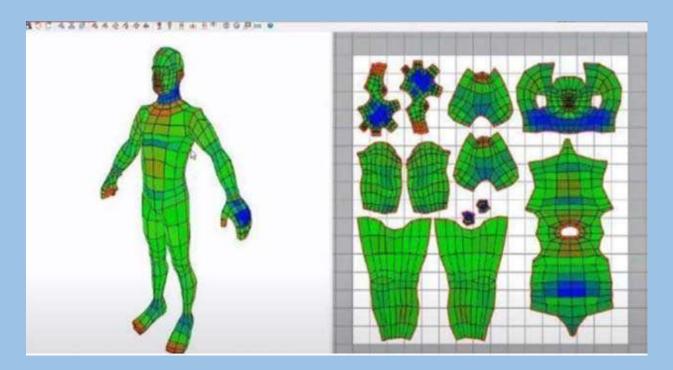
### 3. "SketchUV"Plugin

Download since Extension Warehouse Free In Youtube, you can find a lot of tutorials over how work, Only write: "SketchUV" / SketchUV mapping Tutorials.









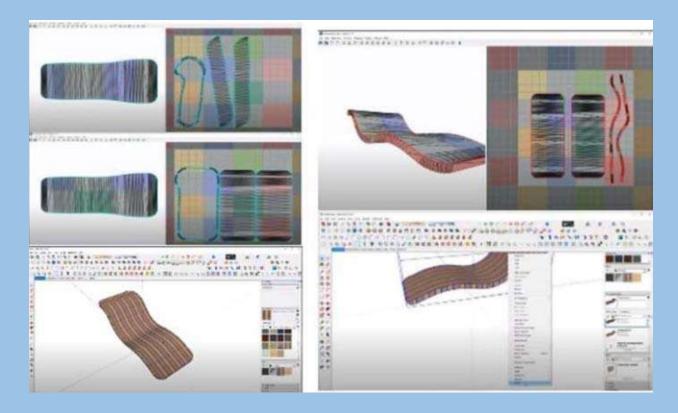
### "Wrap-r Plugin":

That is only some Screenshots to see a little bit how that works, Making the juste coordination between Geometry and the Textures.

Here is from the ""Wrap-R Plugin "" Youtube-video.









### **Thru Paint Plugin**

Here some images over Thru Paint by Fredo. (since the video /Sketchup Essentials channel).

Video (6 min 26 seg)

### Youtube Video by 'The Sketchup Essentials':









### "SketchUV" plugin (From 'Extension Warehouse')

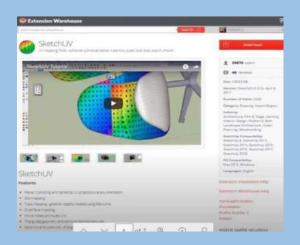
Some screenshots of these plugin,

You need to see some video to better understand how work.



There a lot in Youtube / "Sketchuv" mapping tutorials.

--(These group imagescomes from the video "UVmapping" by Robson Jacobsen youtube-chanel)--.





Not so difficult but you need to see each video plugin To better understand.(5—6 minutes+-).

I prefer the Thru Paint plugin, because is very specific and complete

### **Author Bio**



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An internationally acclaimed artist-cum-architect, Claudio Feldman was born in Buenos Aires, Argentina. He has over a hundred successful art exhibitions under his belt. For the last 20 years, he has been involved in creating stunning artistry through digital 3D design software such as SketchUp, and bringing them to life via 3D printing. Furthermore, Claudio is an accomplished architect (Architect - University Architecture BS AS/FADU-UBA) and has even published many books on the subjects.



# REVAMPING YOUR INTERIORS WITH STUNNING LAMP MODELS FOR SKETCHUP

**ARTICLES** 

Decorate Exquisite interiors in your way using the glittering lamp models From SketchUp. This article is a practical introduction for interior designers to create 3D models. Covers the basics of creating 3D models before showing how to create space plans, model furniture, and accessories, experiment with colours and materials, incorporate manufacturers' models into project plans, and create final presentations and animated walk-throughs for clients.







### **Lighting Design**

Lighting design plays a key role in creating the right mood and adjusting the ambiance of interior spaces. Interior designers have different lighting resources that help create functional spaces that can adjust to those specific needs of clients.

Residential interior designers utilize several types of lighting to create the correct amount of lighting in a room. It is important to understand the use of each type of lighting source available and which particular need it will satisfy in a successful home lighting plan.

General lighting is one of the first layers of lighting used in modern interior design and refers to the light used for the overall illumination of the space. These types of lighting sources provide basic lighting requirements to create an accessible space where users can move around easily in a safe way. Recessed ceiling lights, or overhead ceiling fixtures can meet general lighting needs. General lighting can sometimes be the existing lighting or part of the new lighting design plan.

### Different types of lighting fixtures

SketchUp has created countless lighting fixtures and decorative lamps to add a

glamour quotient to the interiors. Some of them are discussed below:

Table Lamps



If we click in the table lamp section, we can see that there are 369 different designs of table lamps. Table lamps fall under the Mood Lighting category. Mood lighting is as



### Floor Lamp

If you click the floor lamp section you will get more than 40 floor lamp designs in SketchUp. Floor lamps occupy a special place in every designer's heart — stylish lighting is part decor and part utility, able to

important to the overall look of a room as general and ambient lighting and a space would be bare without it. It makes a room pleasantly inviting by creating pools of light which counteract the shadows caused by general lighting. It's also an important element of a room's style as it tends to be equally concerned with style as it is with function.

stand on their own and make a distinct impression even when they're not in use.

### **Pendant Lamps**

Pendant lighting designs are available in all colours, for all tastes and styles. Pendant lighting fixtures are great for large and small home interiors, they save space on a table or floor. Hanging lamps are a functional and beautiful decorative element in modern interior design, that can be a focal point of dining room, Kitchen Island or living room decorating. There are more than 345 pendant lamp designs in SketchUp.

Hanging lamps are the perfect solution for illuminating rooms with indirect light. With its unique, creative design, this golden pendant lamp creates an island of light with an individual

character throughout the home.

### Wall Lamps

Wall lamps, also known as sconces, are stylish accessories that can really make a space glow. There are many uses for a wall lamp, even though they might not to mind right away.



### Conclusion

If one is using SketchUp and would like to quickly take the design visualization to the next level in terms of graphic realism, Interior Designers and architects must try out the various designs of lamp models for SketchUp.



### 20 AMAZING SKETCHUP PLUGINS FOR DYNAMIC 3D MODELLING

SketchUp is a popular 3D modelling software that's intuitive and easy to learn. It's mostly used by architects and interior designers, but it's also very popular in the maker community. Plugins are tools developed by members of the SketchUp user community who want to enhance the native tools by making them more powerful.

SketchUp is useful right from the initial phases of the design to the completion of the project. We've compiled some of the best plugins will have detailed discussion about them and their uses in 3d Modelling.



### How to Install Sketchup Plugins

Once you've downloaded a .RBZ file from the innerwebs save it to where SketchUp can find it. By default, that location is your Sketchup/Tools folder. In older versions of SketchUp you'll need to use your Sketchup/Plugins folder.

After your file is in that folder, close and restart Sketchup.

When you reopen SketchUp your plugin will initialize. Depending on the plugin, using its functions may vary.

### 1) Joint Push or Pull

Joint Push Pull is an extension from Fredo6 that contains a number of tools to expand the face extrusion functions in SketchUp. Practically, this means that you can now push pull multiple and curved surfaces within SketchUp. In addition, tools like Vector Push Pull allow you to extrude the footprint of a curved surface into a flat shape, and more!

### 2) Multiple Offsets

As you start working with more advanced shapes in SketchUp, sometimes you need the ability to offset multiple faces at once, or the ability to offset edges multiple times with the same tool. This plugin allows you the ability to do both of these things.

### 3) CLF Shape Bender

Create a shape to bend. It must be a group or a component. Then select a single horizontal (red axis) line to use as the base for bending. Then select the curve that the shape will bend to match. Wait for it to



think, then it will show a grid and preview of where your object is going to transform to. Press the Up-Arrow key to toggle the orientation of the hend

Access the plugin via Plugins > Chris Fullmer Tools > Shape Bender, or there is a Shape Bender toolbar.

### 4) Random Push Pull

Randomly Push Pull faces to a min and max value

### 5) FredoScale

FredoScale is a plugin for Sketchup, Programmed by Fredo6, for Interactively apply a number of

geometric transformations, such as Scaling, Tapering, Stretching, Plane Shear, Twisting, Bending and Rotation.

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With FredoScale one can orientate the selection box around a set of objects and interactively apply a number of geometric transformations, such as Scaling, Tapering, Stretching, Plane Shear, Twisting, Bending and Rotation. By extension, some transformation can be done without a selection box.

### 6) Soap and Bubble

The free plugin gives modelers the ability to easily create a multi-faceted face inside of a closed group of three or more lines. It's as simple as selecting the lines, start up the plugin, tell it how many faces you want the new face to have, and then sit back to watch it work its magic. The plugin also lets to inflate or deflate the new face after it has been created.

### 7) Curviloft

Curviloft is a script dedicated to Loft and Skinning, that is, generation of surfaces from contours. Loft by Spline joins separate contours, open or closed, by smooth splines. Loft along Path joins contours, along a given rail curve. Skinning creates surfaces bounded by 4 or 3 contiguous contours.

### 8) Selection Toys

Selection Toys is a set of commands to manipulate selections. Filter out particular geometry based on edge, faces, groups, components. An extensive suite of tools that allows you to customize your toolbar as you wish using the UI Settings using Tools > Selection Toys > UI Settings.

### 9) Weld

Weld allows you to join multiple connected edges, curves, and arc.

### 10) Fredo6: Bezier Spline

This extension draws a variety of Polylines, Bezier and Spline curves, all in 3D. Version 2.1a fixes issues related to icon size.

### 11) Mirror



This extension helps to select objects by picking 1/2/3 points to define a point/line/plane: then choose to Keep/Delete the original objects.

### 12) LSS Matrix

It is an extension of Sketchup, which allows advanced copying of groups and component instances.

### 13) QuadFace Tools

It's an organic modelling extension that allows you to create organic shapes. What it does is it smooths out geometry to make it look more organic. The reason this is important is that it works best with shapes that are made out of quads, or 4 sided pieces of geometry.







### 14) Sketchy FFD

It is an exclusive SketchUp extension that includes a control cage to an object facilitating the mesh to be operated through control points.

### 15) Section Cut Face

If you are looking for a plugin to create your section slices in SketchUp you are in the right place. This plugin will create a group of the section cut you select and fill it up automatically.

### 16) Angular Dimension

Angular dimension helps you measure the right angle. his tool comes under the features of marking dimensions in SketchUp. Whenever you need to mark a distance and angle in your model, linear dimension and angular dimension prove to be very useful.

### 17) Clean Up:

A superb plugin to remove unnecessary coplanar edges and clean up imported geometry. This SketchUp extension can also be used to:

- Fix duplicate component definition names (when in model scope)
- Purge unused items
- Erase hidden geometry

### 18) Purge All

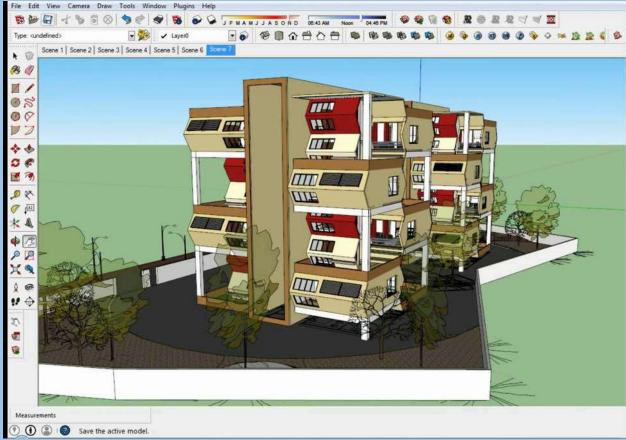
Purges' your model of unused Components, Layers, Tags, Materials and Styles: its dialog makes each type optional: there is also an optional closing Report showing numbers, or a Log file also listing the names of the purged items.

### 19) Simplify Contours Tool

This Plugin allows you to select the topographic lines (Contours) and simplify them as much as you want/need. If you're original topographic lines were splines in AutoCAD this is definitely a must, for your model.



### 20) Edge Tools



ThomThom's handy palette of edge-related tools saves you time in multiple ways, enabling quick simplification of imported DWG site plans, the ability to split a face into multiple planes, and — most significantly — highlighting of imperfections so you can clean up your model in a flash of seconds.

### Conclusion

The tools and plugins listed above are only the ones we believe are the most important or interesting to know for any user who wants to get started. One thing is for sure: For whatever project is there in hand there's a SketchUp tool that can solve it in a highly efficient way.





### SHADERLIGHT 2020 FOR SKETCHUP 3D RENDERING - REVIEWS AND UPDATES

### Features of Shaderlight 2020

Shaderlight is an interactive 3D rendering plug-in for SketchUp that enables anyone to transform a SketchUp model in to a photorealistic render. Whether you're an architect, interior designer, 3D rendering expert or using SketchUp for fun, the simple to use yet powerful technology behind Shaderlight will bring your designs to life.

Some important features of Shaderlight have been discussed here.



### **Light Emitting Materials**

The new material type combines the features of the old Self Illuminating material type and an associated area light and both visibly glows and emits light that illuminates other surfaces, making it much easier to achieve the desired lighting result.

Designed with workflow in mind, the Light Emitting material type has two modes of operation — one that uses the underlying SketchUp material to define the emission colour and another that allows the colour to be specified in terms of correlated colour temperature.

Light Emitting is intended to replace both Self Illuminating materials and area lights because they produce the most physically accurate results for less effort. The old material type and area lights have been retained so that existing models continue to work and to support particular non-physical effects (such as invisible light sources).

### Upgraded and fixed some dialogue issues on Windows

Some Windows machines with certain versions of Internet Explorer installed displayed the Shaderlight dialogs (such as Render Settings and the Light and Material editors) with incorrect layout and inoperative controls, making them difficult or impossible to use. The Upgraded version of Shaderlight has addressed those issues that could be reproduced on the system.

Fixed incomplete exports of models with certain texture types



Certain texture types are unable to be exported by Shaderlight and the presence of such textures would prematurely abort the export process, resulting in renders with missing elements or crashes of the Shaderlight render process. These models should now export and render to completion, although the affected textures are still not exported – geometry with the affected textures will render with a flat colour for now. The new version of Shaderlight still

continues to work on addressing the actual texture export.

### Five easy steps to use Shaderlight 2020

With no complicated settings to master, any SketchUp user can achieve great results with a minimum amount of fuss.

### 1. Starting to render

With Shaderlight installed, there will be three buttons appear in the SketchUp window, start render, material editor and render settings. Click on the camera to start the Shaderlight render and you can see it

for SketchUp

Report cost, length, area,
volume, and weight

Large (Fa)
Large

begin to progressively refine in the Shaderlight render window.

Shaderlight for SketchUp fully supports SketchUp's material library so as this model already has some SketchUp materials applied, Shaderlight automatically converts them in to fully textured Shaderlight materials as well as applying automatic lighting using SketchUp sun, sky and shadow controls.

The Shaderlight settings menu controls render resolution and render quality. The Shaderlight window will show the render at the resolution specified and quality setting. With auto updates switched on, the Shaderlight render automatically updates every time a change is made to the SketchUp scene.

### 2. Applying Materials

Apply materials to the model using the SketchUp paint bucket. One can then use the Shaderlight Material Editor to add different finishes to all the "in model" materials. To make it even easier, Shaderlight already sets "Auto" finishes to all of the materials in the Google SketchUp library so it produces a great result for the users.

### 3. Setting Lighting

The lighting and grey SketchUp background need to be adjusted so that any reflective materials such as the windows in this scene have something to reflect. In the lighting section of the settings menu one can choose from a selection of pre-set HDR's or add their individual choice. The beauty of Shaderlight is that there is no need for waiting for the render to finish or reexport the scene if the user wants to change anything. One can continue to make adjustments to any part of the scene and Shaderlight render will automatically update.





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### 4. Adding a Background

Using the render settings menu one can choose to a background for their image. With options for SketchUp background colour, IBL environment or custom background it's simple to apply a background image anywhere in the model.

### 5. Final Render

With render complete one can zoom in to 100% to see the user's final image at full resolution.

### Conclusion

Whatever the business size may be whether it's a small or mid-sized landscaping business, one will love the convenience and power of Shaderlight. Its 3D rendering tools can make bring the virtual designs to life. It can add realistic enhancements to any SketchUp design, including landscapes. In the end, one can use it to impress clients, win sales, and boost profitability.





### THE 10 BEST RENDERING SOFTWARE AND PLUGINS FOR SKETCHUP

These days, there's plenty to like about the little 3D modelling program. As SketchUp was introduced from the last decade, it totally transformed the world of 3D Modelling. This transitional journey was not an easy one. Its rise to competent modelling program has been aided by its compatibility with some of the most powerful plugins and pieces of rendering software the market offers.

Whether the user is a beginner or an engineering student or a tech savvy rendering artist. SketchUp has something to offer. The user-friendly nature of these amazing plugins lends themselves to be easily approached by beginners, and fun to master for professionals.

Presenting the 10 best user-friendly plugins to transform 3d Modelling program to visualization powerhouse.



### **VRAY**

Everyone whose set foot inside a design studio knows what VRAY is. As technology advances, so does V-Rays ability to produce the most mind-bending visualizations, renderings, and animations possible with ones and zeros.

V-Ray comes equipped with a plugin that interfaces directly with SketchUp. It certainly comes with a learning curve, but those willing to put in the time are rewarded with the ability to do just about anything with a rendering. With V-Ray, SketchUp is instantly transformed into a rendering tool professional can be proud to utilize.

### Allura GPU for SketchUp

The rendering plugin utilizes the power of your system GPU to accelerate renderings and is a GPU based rendering plugin for SketchUp. Allura GPU uses the video GPU to create amazing rendering image with high speed and excellent overall rendering experience.

Allura GPU for SketchUp is powered by NVIDIA Iray which gives it all the qualities of an excellent SketchUp renderer. This software uses computing light paths with simple settings that are automatic. It is one of the best software to render SketchUp on the market.



In addition, some its features include indirect illumination, colour bleeding, reflections, refractions, soft shadows, blurry reflections, reflective and refractive caustics, and volume scattering; users just need to edit the materials and click render for amazing results.

### **Ariel Vision**

This software gives a realistic rendering of objects and models inside SketchUp. It creates wonderfully rendered images without using complex settings which is ideal for designers. The plugin is powerful yet maintains a clean and easy user interface.

Ariel Vision has many unique features that include one-click rendering with great results from predefined settings, seamless integration with SketchUp full Reflection, and transparency controls for more realistic materials.

### **Twilight Render**

Twilight Render is a visualization tool for professionals and hobbyists alike. In fact, that's exactly how it's marketed, and with good reason. It presents the user-friendly interface SketchUp users appreciate, with a powerful rendering engine that can produce photorealistic images for even the greenest of amateurs.



Twilight Render isn't the most feature-rich rendering program in the world, but it provides just enough in terms of quality and speed to find plenty to like here. For people who are just getting their visualization foundation underneath them, it's an absolute slam dunk and one that won't cost them much to get up and running.

### **Keyshot**

Keyshot utilizes real-time rendering in a way that allows you to see the results of a rendered scene as you're working on it. That means the user can tweak textures, lighting, camera, and even massing and instantaneously view the rendering.

### IRender nXt

IRender nXt is a powerful plugin that creates photorealistic renderings directly inside Trimble SketchUp. The plugin easily turns designs and models into superior images. This is an ideal tool for architects exhibiting their building plans. This software is ideal to render SketchUp files.

This software is also ideal for landscape designers and set designers needing quality images to showcase their designs by optimizing users' workflow by saving settings inside the SketchUp model which allows users to post-render updates without beginning over.

### Raylectron



With Raylectron users can edit how the model should be with various lighting settings, from sun, sky, and other settings. The X-ray vision feature enables the user to view interior render without removing the exterior.



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### **Brighter 3D**

Brighter 3D is another exclusive SketchUp plugin to try out. It works within SketchUp's already user-friendly interface, and has enough in terms of options and flexibility that experienced users will love. It supports a variety of different lighting models, including artificial and HDR.

### **Twilight Render**

Twilight Render is a visualization tool for professionals and hobbyists alike. It allows the user-friendly interface that SketchUp Users appreciate.

### Shaderlight

This software gives a different more realistic rendering for SketchUp with lots of options via various modes and tools which simplifies the work model. Shaderlight creates a unique fusion with its uses, where the user has the option to choose between progressive rendering and single shot rendering.



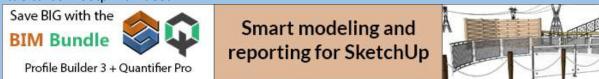


# SKETCHUP WITH BEN CUNLIFFE ARCHITECTS – GREENER AND LIGHTER

**NEWS** 

Most architects themselves dream on staying in quite elegant houses in the wilds – it is ironic that their firms design such houses. Ben Cunliffe Architects from Lake District National Park uses SketchUp to design innovative, beautiful buildings across the UK, and today we will take a look under their hood.

Ben Cunliffe Architects is pulled by a team of very talented designers and architects who are exceptionally mindful about one thing: the environmental impact of their work. Each of their endeavors from design to construction to maintenance are "clean" – as much as they could be – and produce very little carbon footprint indeed.



The buildings Ben Cunliffe Architects designs and constructs are designed for maximizing sustainability and energy saving. Indeed, the firm is notorious for its innovative high-tech designs of low energy, sustainable, environment friendly, low emission designs. These designs make use of any green technologies they can in the given scenario – biofuels, solar panels, ground source and air source energy, self-contained waste management systems, rainwater and dew/thaw harvesting, reed bed filtration – you name it.

So, how do they do it? The answer lies in the 3D design software they use — Trimble SketchUp. Yep, SketchUp is just as much useful in designing environment-friendly buildings as well, in any scenario. The team started to realize this very near their start way back in 2001. And today, they are award-wining architectural firm handling million-dollar projects routinely - all through depending on SketchUp.

### Why SketchUp

At the very beginning, the team at Ben Cunliffe Architects realized the speed and efficiency of SketchUp for these kinds of projects. It was an excellent choice already at that time for 3D visualization of models to the clients. So, naturally the team slides into using it for all of their design purposes quickly on.

Ben Cunliffe Architects finds SketchUp invaluable as an aid for communicating to clients, planners, builders, engineers, joiners and other trades. With a large TV in the wall at their offices, giving virtual tours to clients using SketchUp becomes exceptionally easy and useful. Using this method, clients often give their feedbacks right then and there — making the workflow smoother and much faster than it would have been if the work was delivered for review at the client's own system.

Typical workflow at Ben Cunliffe Architects



The design life of a bespoke building at Ben Cunliffe's starts at the couches. The architects just have a sit-down with the client, and they simply start listening. With a tracing paper in from, the words take shape right in front of the client, and they are happy to guide the artist-architect's pencil the way they want it

When a preliminary sketch is ready, it is upped – to SketchUp screen. The design comes to life in 3D, getting the addons and the nuts and bolts defined precisely. This 3D model is then shown to the client (remember the TV?) and they suggest modifications. This may go on back and forth a few times until everyone is happy with the model.

But that was just the fun part. Now comes the serious part. Once a 3D complete plan is agreed upon, it is time to create workable engineering drawings from that. And that is where the other half (some may call it the better half) of SketchUp comes into play — LayOut. With LayOut, the layouts and other engineering drawings are made, and paper copies are printed out (only when necessary). And then it's off to the contractors' with the rolls (or pen drives) of plans!



### Wrapping up

Ben Cunliffe Architects is devoted and fanatical to green building. Modern advances in environmental principles and sustainability in architecture dictates their work firmly. It becomes more difficult when



they have to work with old, historic houses that they can't much modify but they do their level best to make what's of use available, and insert what's efficient wherever possible.

Ben Cunliffe
Architects' environm
entally sound houses
incorporate
renewable materials
and technologies
such as SIP panels.

The planet is thankful to BCA for providing lighter, greener, sustainable architecture for a change.



### VIEW WIZARD IN IRENDER NXT - SAVE YOUR VIEWS WITH EASE

The great SketchUp extension, iRender nXt, has been dazzling us for quite some time now. Now they have added a new feature in the toolbox called the "View Wizard". It is used to save views. Today, we will talk about what it is and how you use it.



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### About iRender nXt

As you most probably know, iRender nXt is one of the best rendering engine extensions available for SketchUp. The advertise the product as "the only renderer you will ever need" - and it is not much far from the truth.

IRender nXt merges seamlessly into SketchUp, and the plethora of lighting and material settings make it nigh impossible to ditch if you ever want your model to look nice. The plugin is quick and easy to use and you can create very

much photorealistic renderings using the app, letting you bask in the glory of your magnificent work.

### What is the View Wizard

But it seems the work never stops at the developer's studio, and they have recently added a nifty new feature to their already awesome toolset. This new tool is called the "View Wizard", and basically, you use it to save your views — and later, load them back, of course.

To be precise, the term 'View' means camera settings here. The feature records the camera settings of the plugin, saves them in a file, and lets you restore the settings from files into a view panel. Additionally, the View Wizard feature lets you do the following:

- Save the view settings used to make a JPG rendering and load it later
- Save the present camera settings from your model and recall
- Get the view settings from a different model, or even from a different system, and use those settings on your own model
- Set different, predefined views of a model (separate from the present view)

### How to Start the View Wizard

There are two ways to open the View Wizard. The first and the easiest way is to find the View Wizard button in the toolbar, which looks like the camera icons from smartphones and usually beside the layers icon.

The second way is to run it from the options widow. In this way, first open the Setup Options, then go to the Styles tab (between Render and Lights). Here, you will two boxes – Auto reflection and View Wizard. Click the "Load View Wizard" button in the box to start up the view wizard.





### Using the View Wizard

The View Wizard is divided into two main parts – model views and other options in the right, large box named "Selected View" and the "Models with Saved Views" list box on the left.

Click on a model name in the list (that means it has some saved views for it) and you will see a detail description of the view settings in the right box. You will see a small picture of the view right away, with settings and statistics on the right. For example, you can see the view name, the type of camera used for the view, the field of view, the eye position, and more.

The smaller section underneath will have thumbnails (or list) of other views associated with the model, you can select one to see it above.

### Saving a View

Without loading any model views in the wizard, look in the bottom left of the wizard (beneath the list of models with views). There will be a "Save Current View" option there – you can use it save the present camera settings of your model in SketchUp. The file gets saved in the user's Application Data folder (use "%appdata%" in explorer to open the folder if you want), under appropriate folder names as per the model.

### Loading a view

When you have a model's view selected in the Selected View box, click on the "Use for Rendering" button (middle button under this box) to load the camera settings associated with the view and apply it for the rendering. Note that this does NOT apply the view settings to the present SketchUp window, regardless of whatever model is in that window right now.

### Loading View from JPG

The iRender nXt app now saves all rendering JPG exports with the camera settings attached to it. Just use the "Browse for Image" button to load the view settings attached with it. You can then use the "Apply" button to use those camera settings in your present model.



**Tip**: One clever tip about the View Wizard – save a bunch of common views for a simple dummy model and load them quickly in your work. Saves you the hassle of finding that perfect view you used last month.



### HOW RPIMAGE FILTER ENHANCES SKETCHUP IMAGES

### Rpimage filter in Render plus for SketchUp

RpImageFilters is a free Plugin for SketchUp to apply filters to improve SketchUp images. This amazing plug in helps to sharpen the rendered image or apply other standard filters.



### **Application and Download**

For starting this plug in one has follow the simple steps.

- First download the plug in from Download page.
- The next step is Click to install RpImage Filters to install it.
- Once SketchUp is opened then Load RpImage Filters from the SketchUp Plugins menu.

In this article we will have a detailed discussion about the contents of the Plugin and how it enhances the images of the model in SketchUp. The contents are mentioned below:

- Settings
- Wizard Functions
- Filters

Filters are classified into many sections which includes

- Original Image
- Brightness
- Contrast

- Saturation
- Sharpen
- Soften
- Smooth
- Gama
- Gaussian
- Embossed
- Edge
- Grey Scale

### **Settings**

The setting function comprises of Image Size and Get image from

### **Image Size**

Image size selects the size of the image to filter, and after filtering it saves it.

### Get Image from

It gets special image modes - faces only, edges only, etc.

### Wizard

Wizard function consist of the following options



### Refresh

It reloads the current SketchUp window as the base image.

### Save

It saves the filtered image to disk.

### **About**

To view the version in SketchUp load the about page

### Help

To load this help page.

### Close

This option helps to close the Wizard function

### Undo / Redo

To remove or restore filters which the user has applied

### Reset

To reset Tone Operator or Filters to the default values.

### Zoom

Zoom all fills the dialogue with the image.

### **Filter Functions**

Filter functions in RpImage includes the following:

### **Original Image Filter**

It exactly portrays the original image as it is drawn in SketchUp

## for SketchUp

### Report cost, length, area, volume, and weight



### **Brightness Filter**

The user can increase the brightness of the model as desired.

### **Contrast Filter**

Once can fix the contrasting level of the model to give extra lighting.

### Saturation Filter

It specifies the colour settings, when the user add higher values, it adds more colour, if one lowers the value it moved towards grey scale.

### Sharpen Filter

Software sharpening creates enhanced sharpness by making the edges more contrasty. The algorithm notices when colours or intensities change in the image and sharpens up the transitions. You can apply this, and other filters repeatedly to enhance the effect. Just a little sharpening can add detail to a rendering.

### Soften Filter

Softening smoothens out the transitions at "edges" where the colour changes. It produces a softer look to the model by changing the intensity as well.

### Smooth Filter

A smoothing filter can improve the appearance of scans of half-toned originals. Smooth Filter not only helps in colour transitions but also integrate the colours to produce a smoother image.



### Gamma Filter

Gamma Filter compensates for the differences in colour display on a CRT screen. The main function is



to change the intensities of colours.

### Gaussian Filter

Gaussian Filter is used to blur images and also remove details in the models which is unwanted.

### **Emboss Filter**

The Emboss Filter creates the effect that an image is embossed into a thin metal plate. The filter does this by changing the original object to Gray, using the object colour for the highlight on one side of the object, and using a complementary colour for the shadow on the opposite side.

### **Edge Filter**

One can use this filter to enhance edges so one can easily identify boundaries and property lines, as it recognizes edge transitions and displays only the edge lines.



### **Gray Scale Filter**

Grayscale images are a kind of black-and-white or grey monochrome images and are composed exclusively of shades of grey. With the help of this filter one can always convert coloured image to grey scale image by setting the saturation to 0.

As we have introduced the features of RpImage filter from RenderPlus for SketchUp, we see through its various

components it creates exceptional realism which is the key to clear communication of any design. To create exceptional image quality one can always use these filters.



### ACHIEVING UNIQUE VISUAL RESULTS BY CREATING MULTIPLE SECTION PLANES

Today we are going to take a look into ConDoc Tools using multiple layers, to control the visual style of that section cut. We will also look into the functionalities of Lumion. ConDoc tools drastically expedite:



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### **Definition of Lumion**

Lumion is a photo realstic render program which creates

- skills
- animation
- Virtual tour and virtual reality.

It is one stop need what finally polishes your SketchUp mode.

### Layers

Now let's discuss using Layers, in ConDoc System. This helps to create a clean way of modelling in SketchUp.

- Open ConDoc template
- Take the walls and put it into a group and assign a layer, assign first the exterior layer and then the interior layer. This actually helps for the meticulous representation of the project.
- Using ConDoc system is mainly grouping and assigning a layer to it.
- To create interior elevation or section go to ConDoc system and ten go to section Tool. Section Tool added a section plane and it creates a scene named AA.
- Then it flipped on a bunch of layers on and off based on the settings, and changed to a style.

- Now one has to turn off the decorative option.
- We always have to keep in mind the basic rules of scene, if one changes the properties of the scene, one needs to remind it.
- Then go to the scenes dialogue and update it by clicking Update all.
- Go to visible layers and then go to section AA, herein we find the decorative objects are off.
- Then just right click the scene tab and Update.



 At this point if we feel our section cut is not revealing anything, Add some extra section plane.

### Rules of SketchUp

There are few thumb rules for sketch up. The rules are specified as follows:

- You can have an active section plane of your model as per the levels.
- If you go the base levels of SketchUp you will find walls, doors and windows.
- Once we create groups for SketchUp we can enable each one of those groups into one active section plane.
- 4) Once one eliminates/ Chop the walls ceiling equipment chopped.



- 5) Double click on the walls, chop the walls.
- 6) Tap the right arrow to add a section cut there. Press Escape to back up.
- 7) To show the windows properly double click the windows and add a section cut, tap the right arrow and snapped the midpoint and click.
- 8) Tap the right arrow and snapped





the midpoint and click.

- 9) Nice Clean chop through the ceiling. Now let us look into the ceiling equipment.
- 10) Make a cut through in ceiling equipment



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Finally update the section plane AA. You can do this by going to design and then go to the ceiling fan, Lets rotate the ceiling fan.

### View the Section Plane

Add a section cut by clicking the right arrow and updating it.

- Viewing the section plane
- To hide the visibility of the plane cut the ceiling equipment, Add and active cut pointing the opposite way
- Tap right arrow click it and put it in front.
- Remind Section AA and save It.

### Layout

- 1) Now tap layout in ConDoc tools go to 8 by 11 Landscapes.
- 2) Go to scrapbook and then go to section.
- 3) Drag and drop the section and rebuild the file and see the master suite. We can see the scale is optimised for vector rendering. Select the view point to 8.25, we can see the windows showing up.
- 4) The main function of these multiple section plane is that it has the ability to hide some equipment's and also to control our section plane.
- 5) ConDoc actually Compartmentalize each one of these containers with each creative object to display.



### TOP 8 STYLES TO CREATE WALLS IN SKETCHUP

### TIPS & TRICKS

In this article we are going to have a detailed discussion about PlusSpec and 7 styles one can adopt while crafting walls in SketchUp.

PlusSpec is a power extension for SketchUp mainly used for professional architects and engineers. PlusSpec automates the design process but also layers textures and much more. PlusSpec has parametric functionalities that mean you can edit your work at any point of given time. It creates price materials along with 2D plans.



There are different ways of creating and designing walls in SketchUp. The eight main extensions are specified below:

### 1) Offset Push Pull

To run this extension in your 3d Model, you have to follow the process

- Select Tap F key and single click it
- Offset your thickness off the wall
- Push Pull the wall as per your height.

### 2) Draw Profile and Extrude with FollowMe

Construct a 12'and 4" Wall, select the face of the object and activate the follow me tool to extrude the wall. This tool creates the wall in a very simplistic way.

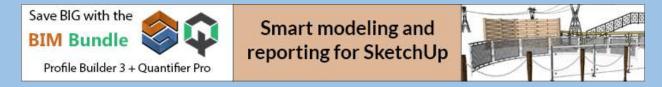
### 3) Model Framing manually with Move Tool in Copy Mode

For detail wall creation one can use this specific Tool, one must follow the steps to create the wall.

- Offsetting it 4 inches, you then push pull it to the height of the base.
- Double click into a group
- PushPull out the beams thickness
- Model out the stud with 10ft High, Push Pull it to 1 and ½ inch.
- Make it a component2 by 4 wall studs



- Then just use the Move Tool and copy mode to copy and select the walls
- The next step is to click the M key and click it to the point.
- Tap Control key to copy with 16 Inches
- Type 25 and then just move and copy tool to copy the beam
- Create a rotated copy and build the frame.



One can use the ray function of the copy mode, it helps to copy the pillars fast.

This extension helps manually model this type of framing quickly.

### 4) PushPull in create Face Mode

You can draw the profile using push pull and then tap the profile by using the control key along with Push Pull. Tap the control key and push pull that out by 4 inches. So, a wall is produced in the easiest way.

### 5) 1001 Bit Tool Wall Tool

It creates wall based on thickness and height which one dictates,

- Let's consider the wall of 10'6".
- Click and incorporate the height
- Click on the edges to create the wall

This specific tool also helps to create opening in this wall.

### 6) Smart wall assemblies with Profile (Builder)

Another extension to create walls is the profile builder. It creates smart profile and smart assemblies. It enhances to create advanced assemblies in your model. It creates a bottom play, Top Play and some sheathing, if one considers to have a detailed look into the walls, not only one can see the number of dry walls and the sheathing outside. In Profile binder once can add quantifier and can apply cost to this. By using this tool, it doesn't create any openings in the model but helps to generate quantities to sum up the cost of the model.

### 7) Detailed Walls with Meedek Wall.

This special extension has a scientific approach. One can craft the stud by placing the sheathing and top plates. This tool does the actual framing of the studs.

One can create detail work by adding doors and windows to the opening and actually update the edition. Additionally, it labels this planned view, so one can say it is great for wall creation and we can say it is very robust wall creation tool and can edit the framing.



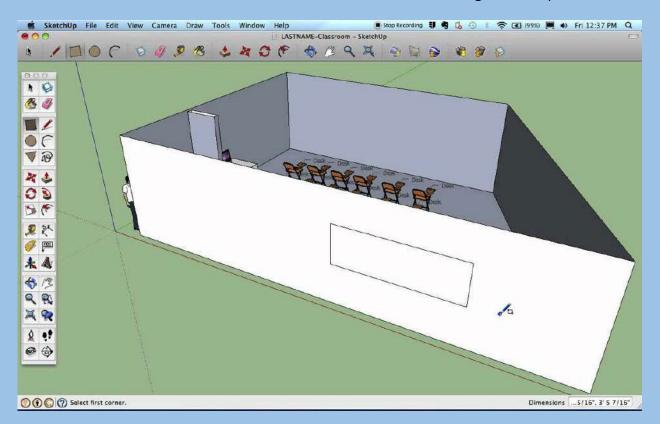
### 8) PlusSpec

This is a full featured beam extension or SketchUp. It creates smart assemblies in the model, so it is more than a wall creation tool. It allows setting different kind of walls, one can set with masonry walls which has parts and pieces which is adjustable.



Adjusting the kind of beam over here. Also, in this feature you can adjust finishing touches outside the model by selecting the brick type and different kind of hardware used on the outside of the model. Different types of detailing work one can incorporate in the model with PlusSpec. Once You draw the wall you can adorn it with the air gap, Additionally, through PlusSpec you can generate different scenes by selecting different views.

Thus, by using these most popular 8 ways of creating walls one can renovate the model and furnish it with minute details and add on a realistic visualization through SketchUp.





### MASTERING TOP 10 INTERESTING SKETCHUP TOOLS

With the help of SketchUp you can craft more realistic architectural visualizations. The capabilities of SketchUp are quite broad, but it can also be a little overwhelming to know which tools to use. Sketchup has its own native tools, which are the essence of its simplicity. They allow you to navigate, create, and edit a 3D model, but it also has additional plugins and extensions. These plugins can help us execute a specific task that native tools are less capable of.



Let's start by listing the most important native SketchUp tools first, the ones that make SketchUp so unique.

### Line Tool

This tool is likely used every single time you design something in SketchUp. As a drafting tool it allows you to create any 2D surface by connecting line segments. The lines can be drawn in the X, Y and Z axis with the left click of the mouse. The shortcut key for this tool is "L".

To draw the most basic lines in your Layout document, you can use the orderly Line tool to draw straight lines or its freewheeling cousin, the Freehand tool, to draw loopy swerving lines any which way you like.

### Eraser

It is basically used to erase the line segments you don't need anymore. The way it works is by clicking with the left button of the mouse over any line. The shortcut key is "E".

In Layout, you can delete entities from the drawing area in a few different ways: To use the Erase tool, follow these steps:

- Select the Erase tool.
- Click any entity to erase it. Or, click and drag the Erase tool cursor over several entities and release the mouse button to delete them.

### Rectangle

Rectangles are simple shapes, but for those of you who like pizzaz in your rectangles, Layout has four rectangle tools. Each tool does a little something different with the rectangle's lines or corners.

No matter which rectangle tool you choose, the steps for drawing a rectangle are the same:



Select your rectangle tool of choice. You find each rectangle tool on the default toolbar's Rectangle menu or by choosing Tools > Rectangles and selecting your desired tool from the submenu.

To set the rectangle's starting point, click in the drawing area. Or type absolute coordinates in the Measurements box. For example, to place the rectangle's starting point 1 inch across on the X axis and 2 inches down on the Y axis (relative to the drawing area's upper-left corner), type [1",2"] and press Enter

(Microsoft Windows) or Return (Mac OS X).

To expand your rectangle, drag diagonally from the starting point and click to set the rectangle's final shape. To constrain the rectangle to a square, hold down the Shift key as you drag. Or, if you want to set a precise size, type an absolute coordinate for the corner opposite the starting point (for example, [7",10"]) or type precise rectangle dimensions (such as 6",8"), and then press Enter or Return.

### Orbit /Zoom /Pan

You can orbit the camera view by pressing and holding the scroll wheel of the mouse. This is very useful to explore our models from different angles. The shortcut for this tool is "O".

The zoom tool let you get closer or farther from the object you're modelling by using the scroll wheel of the mouse moving it forward or backward. It's very useful when you want to see a smaller detail or a general view in the 3D model. The shortcut key for this tool is "Z".

The panning tool helps you to move without losing your previous perspective. It only provides you with a vertical and horizontal movement, and that's very handy when you want to frame a scene. You can access this tool by holding the scroll wheel and pressing Shift at the same time. The other option is to press "H".

### **Position Camera**

To play with your model's height we can use this particular tool. This Tool enables you to view your model at a specific height relative to the surface of your model. That height is meant



to reflect a person's eye height, and you can adjust it to any height you like.

### Offset

What this tool does is generate an equidistant line of any face. The shortcut for using this tool is pressing the "F" button and positioning your cursor on the line or surface you want to offset. Then move the cursor outside or inside according to what you need, and finally give it a selected distance with the numeric pad.

### Push/Pull

Without a doubt Push Pull is one of the most used tools in SketchUp. That's because it allows you to extrude a 2D surface to convert it into a 3D shape. The easy way you can access this tool is by pressing the "P" button, positioning your cursor over the face you want and then clicking the left button of the mouse to start extruding. You can give it a determined value with the numeric pad or simply click again until you're happy with the result.





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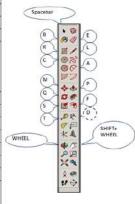


### Follow me

The Follow Me tool in SketchUp lets you create forms that are extrusions. It's a little bit like

Follow Me is especially handy for modelling finishing details that follow a perimeter or edge, such as crown molding or gutters. It also makes

Tool	Shortcut / Mouse	Purpose
Select	Spacebar	Select objects
Bucket	В	Apply color or texture
Eraser	E	Erase elements
Rectangle	R	Drawing tools
Line	L	
Circle	С	
Arc	A	
Move	M	Move elements
Push/Pull	р	Push or pull face
Rotate	Q	Rotate selected elements
Scale	S	Scale selected elements
Offset	F	Offset face
Tape	T	Measure elements / make guides
Dimension	D	Puts dimension in current units
Orbit	WHEEL	Navigating tools
Pan	SHIFT+WHEEL	



easy work of modelling lathed objects, like a spindle, and curved vessels, such as a bowl or a vase.

### **Paint Bucket Tool**

The Paint Bucket tool allows you to select a colour or texture and apply it to a model face. The Paint Bucket tool is used for three primary tasks when modelling and rendering:

Replacing a solid colour or texture with a downloaded texture image from your Texture Library

Push/Pull, except that it doesn't just work in one direction. You tell Follow Me to follow a path, and it extrudes a face all along that path.

Scaling the texture image and resolution Swapping out textures when you're editing the model during the draft iterative process.

### Make Group Components

While SketchUp is one of the easiest 3D modelling software's to learn and use, sometimes smart modelling strategies can make your life a lot easier when working in 3D. For example, one of the things that SketchUp does by default is making geometry sticky. This kind of sticky geometry can sometimes be useful, but as you start working with more complex models, it can cause you all sorts of

problems. However, there is a very simple solution that can help you avoid this issue. This solution is the "Make Group" tool. Groups in SketchUp are exactly what they sound like. They are a number of different geometry items grouped together to make a single item. The time saving thing about groups is that groups do not stick together. This means that when organized properly, you'll never have to worry about going back into your model and trying to edit items, only to find that faces are stuck together and you have to delete faces and remodel them.

It is possible in SketchUp to have groups inside of groups (called subgroups). When you're inside a group, simply select the items that you'd like to add to your subgroup, right click and select the "Make Group" option.

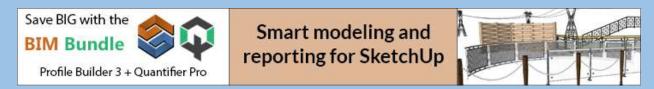
Groups help you keep your model organized. A good rule of thumb is that any time you have a bunch of objects you even remotely think that you might need to change later, put them in a group or a component (see below). Otherwise, you risk creating a model with so many faces stuck together that you'll never be able to edit them in the future.



## BETTER WAY OF DESIGNING THROUGH CONDOC TOOLS IN SKETCHUP

### How to Design with Condoc

Once 3D drawing came into the market, architects and Engineers had real fun is redesigning their models. But as time passed by it became far too complicated. The heavy over featured beam solution had asked too many questions and often came in the way of design. For a seamless design draft and using Realtime visualizations one can go with SketchUp, Layout and ConDoc Tools. This system falls far paced of the functionalities and efficiencies of CAD and a way better than that. But falls all sort of questions and the extra complexities of Beam.



So, with SketchUp, ConDoc and layout, one can customize it as per their requirement, and it's far cheaper, more efficient, fun and time saving.

### Using SketchUp, ConDoc and Layout

So, let's start our model by first selecting the layout and Press Ctrl-N, select again letter landscape document. Now use the scale drawing and create 4 and1/2-inch walls and then press 9 enter so it becomes a 9' wall. It adds a new piece in one's work flow. Create a 32-inch opening, incorporate the door and the window; you can drop those using the select tools. Now we can see we have got our bathrooms. 6' by 9'.

Drafting in layout has been super easy with scale drawing command. Ow using SketchUp ConDoc invitation tool select the tub, Using SketchUp ConDoc Invitation Button drop the toilet and then on another corner using the same SketchUp ConDoc Invitation Button drop the vanity. Now take the sketch and draft it. Save the Bathroom sketch by File – Export-DWG and then export the SketchUp File.

ConDoc4.5 has been updated with SketchUp 2019. Take and project and adhere to any standard. You can completely configure your design adhere to your standard. Now import the design and take measure tools to measure the widths. Next step is to go to the background and the background layer and off the visibility.

Use a rectangle Tool and press and 8.6 "wall using the push pull button create the 3d wall to come to life. Use again the Push Pull Tool to create the door and the window. Use deletes Coplanar Edges and clears the extra Geometry and also the rough edges. Next step is to plan the walls and group the geometry using ConDoc4. Now using ConDoc button clicks the door and the window. In ConDoc one

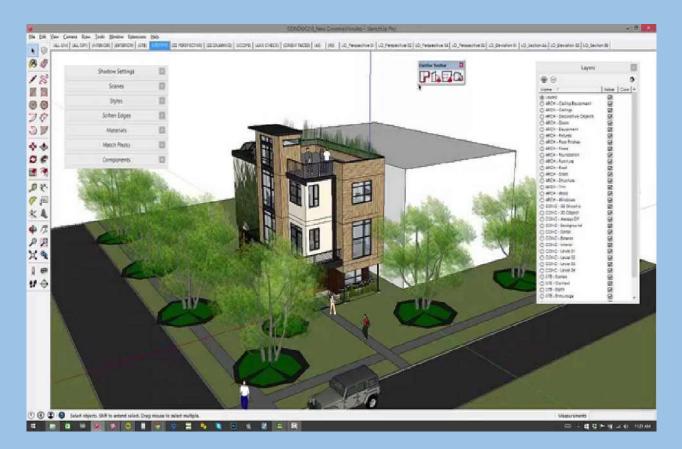


can see the Manufacturing model and See the brand of the fixtures. Here we select Kohler Manufacturing Mode and then drop the tub and rotate it by  $90^{\circ}$ .

Now add on the Condoc Vanity, and select all the fixtures into one group. Then assign the layout which hold the objects, See the elevation and recheck your drawing. Now go to file now go to my templates go to RBC in SketchUp and draw 18-by-24 construction file in the Condoc drawing scrapbook. Now drag the document select and align them vertically and horizontally.



Now, your model is ready. This Unique feature of ConDoc can be configured to automate anyone's drawing and set up a standard.





# USAGE OF SOFT SHADOWS IN SKETCHUP AND HOW IT HELPS TO CREATE REALISTIC LIGHTING

### Soft shadow and its scope

Soft Shadow is a special tool in space design to create an image in SketchUp with Softer shadows from the Sun. It falls under the Lighting Technology which automatically lightens up the default settings.

To start select softness and coarseness below:

Use Medium for your first trial - it will merge about 25 images. Remember sketchy Shadows don't work in ground plane. For softness and width of shadow images the shadow tab provides a set of pre-sets:



Soft shadow tab

The Soft shadow Tab consists of two properties. Shadow processing and Shadow masking.

### **Shadow Processing**

Shadow processing helps to surface the shadows in shade. The areas not in direct sun will be treated as shadowed areas.

### **Shadow Masking**

Shadow masking button will help to recreate the soft shadow image. This will only soften shadows where shadows appear in original image. Shadow Softness - None, Coarse, Medium, Smooth or Custom - sets number of iterations.

Shadow Spread - Narrow, Medium, Wide or custom - sets days and time to process.

There are various quick shadow modes like:

- Soft shadow
- Sketchy shadow

There are other buttons as well in the Soft shadow Tab, and each of the tabs have different functionalities, like shadow mode, Darkness opacity which helps to change the darkness of the shadows. The shadow pattern will be partially transparent, allowing the colours below it to bleed through.

### SketchUp Water Mark Style

Soft Shadows also works with watermark SketchUp styles. This image was made using the NrpTools Crayon style. The watermark mostly, only appears in the dark, (shadowed) areas of the model.





### Smart modeling and reporting for SketchUp



### Using Full Shadows

This button recreates all areas which are not in direct sunlight.

### **Textures**

One can specify a Chipboard texture, or can select an image to use as a texture. The texture image will be applied to the shadows directly, and not applied to the surfaces in the model. This means that the texture will not rotate to match surfaces, and will not get smaller in the distance.

The main buttons to craft a Lighting Technology in SketchUp is the application of Soft Sun Shadow.

### Soft Sun shadow

The process to make soft shadows from the sun using SketchUp's Shadow rendering is very easy. Using SketchUp's shadow renderings creates several images at different times or dates, so we get different types of shadows and then combining them in to an image with softer shadows.

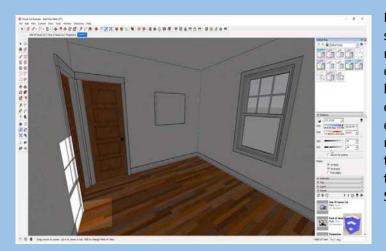
### Soft Artificial Shadow

One can also use to make soft shadows with a Ray Trace Rendering add on for SketchUp. This button also helps in moving the lights and merge images where are some renderers allows to specify larger surfaces for the lights and automatically sample multiple positions from each surface to create the shadows.

### How to apply soft shadow from the Sun

If the drawing is getting sharp shadows under the Sun, in Vray for SketchUp, one can edit the sun settings. The process is explained in a detailed form:

- 1) Environment > GI (skylight) and click on M
- 2) Under "Sun" change the "Size" from 1,0 to 25-30.
- 3) This increase will cause the softer shadows, and make the sun larger in the render; one can also disable the sun above in case the appearance of the sun is not needed, or disturbing.



Lighting plays an important component of a successful render, especially when one is revealing indoor spaces. Realistic lighting is crucial to creating not only realistic scenes but also to leaving a lasting impression and conveying a certain feeling. Soft shadow can add a great detail of realism to any rendered scene by simply blurring or fading the edges of the objects. Hence, we can term Soft shadow as an important tool for SketchUp.



**BLOG** 

## TOP 5 COMPATIBLE LAPTOPS FOR SKETCHUP

If you are aspiring to become an Architect, Interior Designer or civil engineers and love to pursue on 3D Drawings, then you are already aware of computer hardware. As we all Know SketchUp is more of a conceptual platform that is concurrent with most of the mentioned software units but boasts of better affordability and user. If you are looking to set up SketchUp from Scratch, your preferred gadget has the recommended specs sheet for running SketchUp. This article clearly demonstrates the best Compatible laptop that can work on with SketchUp.



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Coming to the laptop selection, SketchUp does require high-end computing resources, including a powerful processor with exceptional single core performance, reliable GPU (preferably with Ray-Tracing support), sizeable RAM for maintaining and handling better workflows, and decent storage support for handling projects, 3D designs, migrations, warehouses, and renders with ease. Apart from that, an excellent display with thinner bezels caters perfectly to the more expressive and conceptual 3D modelers.

### **DELL INSPIRON 15577 7359BLK**

### **Product Summary**

Dell Inspiron I5577-7359BLK is a Windows 10 laptop with a 15.60-inch display that has a resolution of 1920x1080 pixels. It is powered by a Core i7 processor and it comes with 8GB of RAM. Graphics are powered by Nvidia GeForce GTX 1050. Connectivity options include Wi-Fi 802.11 ac, Bluetooth and it comes with Mic In ports.

The Inspiron comes with 15.6-inch TN Display which is has better screen resolution while remodelling the 3d Objects. Though it has a decent viewing angle the display may not be suitable for outdoor conditions but for Indoor usages such as office or room.

The hard disk drive which comes with the laptop is 5400 RPM which you may already know that it can deliver you only poor (or mediocre) performance. But having an additional disk is always better than having nothing. You can install Sketchup and other important applications in the SSD drive and save other files in the hard disk drive.

Clienteles have recommended install a fresh OS with complete updates and Install GeForce experience for a better performance. The laptop weighs 5.7 pounds (2.6 kg) which is by no means a lightweight laptop. If you are looking for a lightweight laptop for Sketchup, then this might not the best right choice



for you. If you are looking for a powerful machine to use from a single place, then this could be your next laptop.



### ASUS Vivo Book S

### **Product Summary**

The ASUS Vivo Book S is the cheapest laptop on this list which is a slim, attractive and powerful machine.

The Vivo Book S comes with a 14-inch display and as you can see the bezels on the two sides of the display are fewer which makes it very attractive. The display is quite sharp with good viewing angles and colour reproduction is quite decent.

Along with a powerful processor (Intel Core i7-8550U), the Vivo Book S comes with a dedicated graphics card i.e GeForce MX150 with 2GB VRAM. Though it isn't as powerful as GTX 1050 it'll surely help you perform any programs which might require any graphical tasks. If you want a laptop for Sketchup with even more powerful GPU, then jump into the next laptop on this list.

### Acer Predator Helios 300

### **Product Summary**

A discussion that concerns powerful notebooks that are still portable enough to be carried around with ease, is incomplete without mentioning the Predator Helios 300.

The Intel Core i7-9750H reappears even on this device and ensures that both 3D modelling and rendering tasks are handled with ease. As modelling is a frequency-intensive task, the turbo clock speed of up to 4.50GHz comes across as a handy resource.

Demanding tasks like conceptual and photorealistic rendering are taken care of by the 6 processor cores and the innovative GeForce GTX 1660 Ti GPU that comes integrated with 6GB VRAM. Acer ensures that working with multiple workflows, datasets, and 3D models is easier with the 16GB RAM. When it comes to storage, you have the 512GB, upgradeable SSD unit to rely on.

The Predator Helios ensures that 3D modelling and rendering are visually enthralling experiences courtesy of the 15.6-inch Full HD display. The cumulative resolution of 1920 x 1080 pixels is worth mentioning followed by the In-Plane Switching technology. What stands out is the widescreen viewing experience that helps you look closely at the interiors and walkthroughs without missing out on the details.

### **ASUS ROG STRIX GL703VD**

### **Product Summary**



Another ASUS on this list –This time it's a full-fledged gaming laptop based off ASUS' very popular gaming line of products; ROG or Republic of Gamers. The Strix GL703VD is on this list because of the sheer size and viewability of its display. Also, because of its affordable price tag. Excellent display with a lot of viewing angles makes for a comfortable experience. It is quite affordable. It has extra multimedia functions. The screen is almost as large as a regular desktop monitor. One of the best features of this laptop is it has a customizable RGB backlit keyboard which is a very useful feature.

### Dell XPS 9570

### **Product Summary**

Dell XPS 9570 is a Windows 10 laptop with a 15.60-inch display that has a resolution of 1920x1080 pixels. It is powered by a Core i7 processor and it comes with 8GB of RAM. The Dell XPS 9570 packs



256GB of SSD storage. Graphics are powered by Nvidia GeForce GTX 1050 Ti. Connectivity options include Wi-Fi 802.11 ac, Bluetooth and it comes with 3 USB ports, Multi Card Slot, Mic In ports.

The laptop weighs 4.4 pounds (approx. 2kg) which might be lightweight for some people and heavy for some others. The battery life on this XPS 15 is quite satisfactory.





## WHAT IS TRIMBLE CONNECT AND WHY IS IT SO USEFUL

For the AEC community working with SketchUp as their major tool all day, Trimble Connect is a boon. Connect is the prime collaboration and connet platform from Trimble, which they are happy to include with the Sketchup Pro subscription! Whether you are working from home or working form a branch – Trimble Connect will make you feel as if you're sitting with your whole team all the time!



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Build your model, generate constructible data, and make the design in SketchUp – and then connect through Connect! Trimble Connect gives you lots of space in the cloud to store your model that is accessible from anywhere using Trimble apps from any platform like Windows, Mac or even smartphones.

Trimble Connect lets you get real-time updates on the project anywhere, everywhere. You can view and review the models, take actions on them, reference them, get the data inside them — and distribute anywhere needed to get to success in a project. Connect joins the right data with the right people at the right time. This provides a robust framework to expedite informed decision making, that enhancing process efficiency.

### **Highlights of Trimble Connect**

Trimble Connect is capable in many aspects, but here are the few that really shine:

### Bridge data silos

Whether you are using just a few tools from the industry or the full set of more than 60 apps, Trimble Connect links them all up. Connecting data throughout all the phases of your building's lifecycle, it will make sure you stay on time and on budget. Files from all over the industry are collected in one platform – at least, the digitized ones.

### Robust data security

Built on AWS (Amazon Web Services), you will find few other collaboration environments as secure as Trimble Connect. The unmatched physical and digital layers of security and impenetrable cyber armor make sure your data is completely invisible to unauthorized personnel and bots.

### True collaboration

View the content, provide feedback, suggest changes, assign tasks, upload finished work, discuss among other players, and doing much more teamwork using Trimble Connect is child's play. At every stage of your project, be immersed in your co-worker's actions and reactions as your baby grows. Connect



targets to provide the right people access to the right data at the right time, and it does so, spectacularly.

### Unlimited Storage

By default, Trimble Connect offers you 10 GB of cloud storage space, which should be large enough for smaller companies with a bit of regular maintenance work. However, for a small fee you can upgrade to the Business plan, which gives you truly unlimited cloud storage. This will ensure that you will never ever run out of space, or worse, lose your data through accident. What's more, the storage comes with unlimited version control as well – meaning you can roll back to a previous version of the same file at any time should you choose to.



### Access anywhere

The versatility and the accessibility of Trimble Connect is what make the best contender in the market of collaboration tools. You can access your projects from any platform—be it windows desktop, a Mac, a smart phone—or even on augmented reality devices! This multi-platform compatibility is what makes Connect so connectable.

### Advanced permissions

Not only giving access of data to people, but giving the right data to the right people is key to properly

planned work with people on multiple levels of your organization, and even outside organization. The advanced granularity of the permission granting mechanism in Trimble Connect lets you micromanage access rights to your sensitive data, making sure it isn't damaged by mistake or misused. Additionally, only an admin can track project history and use rollbacks, apart from a plethora of powerful, admin-only tools.

### Best features of Trible Connect

There are plenty of features in Trimble Connect, too many to name all here. Following are the few among them you will find very useful:

- Users & groups
- Clash checking
- Temporary local offline storage
- Folders
- Export reports
- Releases
- Exchange to-dos using BCF 1.0
- Align models
- 3D markup
- Define custom reports
- Activity Feed



- Selected models
- Change color of some objects
- Permissions & notifications
- Comment on to-dos
- Project
- Model object filtering
- File Explorer
- View/comment clashes
- Save views
- Control visibility





### Smart modeling and reporting for SketchUp



### Wrap up

Ensuring that every project stakeholder is able to see the big picture and yet be able to access the tiniest bit of detail they need to complete their work, Trimble Connect has become the central pillar in the Trimble apps set.

Trimble Connect is available for free with your SketchUp Pro subscription — but with a 10 GB cloud data limitation and for upto 2 systems only. For a small fee, you can upgrade to the Business plan and unlock all features of the software — including unlimited storage and systems!

Collaborating with everyone in your team and even external entitties like client and contractors has never been easier. With Trimble Connect from on-site people to



the AEC consortium in the top floors, from ground-level blue collars to the client – everybody can have shared access according to their need to your project so they work as a cohesive team.



## SETTING WIND TURBINES WITH SKETCHUP RANDOM TOOLS

### Random Tools Extension for SketchUp

Random Tools are a set of tools to randomize various things in a SketchUp Model. In SketchUp, making a scene doesn't disturb anybody. In fact, scenes help you save different model views and properties and then present those views to other people. When you create a scene, a tab appears at the top of the drawing area, so you can simply click the tab to display the saved view. In this article we are creating an energy generation scene and are going to discuss about random tools application.





### Placing the Wind Turbine

One can place the wind turbine which is accessible from 3d extension ware house in SketchUp. Suppose of one needs a large number of Wind turbines in the scene.

Let's take a wind Turbine so it comes as a component. Then group the roller assembly. Explode the components so that one can go and explore the individual pieces and see the minute details, one can minutely examine the blades are accessible.

### Rotating the Blades of the Wind Turbine

To make the rotation process follows the steps:

- If one wants to rotate the blade of the wind Turbine, pick the group or component that needs to be rotated
- Next step is to go to randomize object from Randomize object tool.
   Rotate by 360 degrees.
- But there is a problem; it dislocates from the centre .Herein lies the operational function of the random tool. Random tool uses the centre of the bounding box when working on a group. For group it's not as easy as a component because they don't have a coordinating system.
- Hide the tower and the shaft box of the wind turbine. Now the assembly has to be converted into component.
- Then right click and go to make component. SketchUp picks a corner point as an axis, select the component and bring it to the Centrepoint of the axis. Now the centre point is the component.
- Go to unhide object and select all, now the tower and the shaft box becomes visible.



Now highlight the blades of the turbine and assembly it and set

the component.

### Functions of Randomize object tool

Randomize object tool was on component and now it rotates about the axis which one puts

through. If one wants to repeat it as many times as it wants.

To make a bunch of copies of the windmill, on can regroup and make some copies.

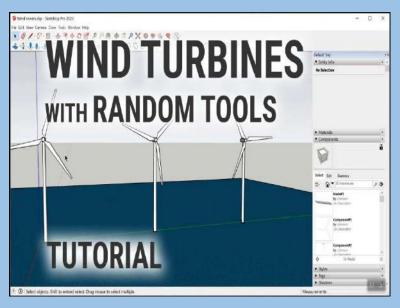
Highlight the rotors and apply the tool. When you need to rotate these objects, the secret point always is the Centrepoint of the component. Placing the object randomly the centre point makes sense for the application.



### Conclusion

This extension contains a set of tools to randomize various things in a SketchUp Model, such as: Object placement, rotation, scale, face extrusion, vertex locations, textures. Also allows to place objects randomly on faces or on edges (with scale, rotation, and orientation variations) and to swap objects randomly. This extension combines several of randomizing scripts.

Specifically, these tools are available:



- Random Face Push/Pull
  - **Random Vertex Positions**
- Place Components Randomly on Faces
- Place Components Randomly on Edges
- Place Components Randomly on Vertices
- Randomize Objects (Scale, Rotation, Position)
- Randomly Swap Objects
- **Randomize Texture Positions**

These tools are useful to create random variations in landscape items (trees, shrubs, etc.) or to add wind

turbines and many energy driven objects. For architectural models, they can randomize repeating textures and create small perturbations that make items look more realistic.



## UNDERSTANDING SKETCHUP 2020 SUBSCRIPTION OPTIONS

In the land of 3D modeling, SketchUp may not be the king but sure is the ace up your sleeve. It has been touted as a toy software in the beginning, but it steadily overcame all that negativity and now has become one of the best 3D modeling software in the market. Today, we will discuss in what flavors you get SketchUp – that is, the SketchUp 2020 subscription options.



Once upon a time, long long ago, SketchUp was available for free. As the popularity grew and it transitioned slowly but surely from an amateur plaything to a professional go-to design solution, they started charging for SketchUp. Still the prices on this excellent software were a steal to say the least. And now in 2020, SketchUp has matured into the subscription category.

You can still get some of that action for free, if your need is light and simple. But to really experience SketchUp's patent flexibility and efficiency, you have to subscribe to better and bigger version. Below, let us see what version offers you what capabilities.

### How many versions of SketchUp are available?

There are four (4) SketchUp versions available in the market – Free, Shop, Pro, and Studio. These are discussed in detail below.

### SketchUp Free

Formerly called SketchUp for Web, this interactive browser app is the simplest version of SketchUp available today and it requires absolutely nothing from you — no cost, no logging in, no installation, nada. Just go to <a href="https://app.sketchup.com/">https://app.sketchup.com/</a> and start creating.

To be honest, SketchUp Free does give you a personal subscription of Trimble Connect. But you may or may not choose to use it. This version also gives you access to the SketchUp viewer apps on smartphones, so that's where the Trimble Connect account gets useful.

The free version of SketchUp does not support files from or to other CAD applications. It can only read and save its own file type, and PNG/JPEG images. It is restricted for commercial usage and so amateur or personal users will benefit most from the SketchUp Free version. You can quickly make some basic designs and drawings in it, great for making floor plans and such.

### SketchUp Shop

This version of SketchUp brings you a beefed-up version of the online editor as above, but with a lot more power. You can now import from and export to other CAD filetypes including the most popular



DWG, you can 3D print your model with this (though not recommended), and you can edit the styles and materials.

Outside the editor, you get a business subscription to Trimble Connect, and you can use the AR feature of the viewer mobile apps now.

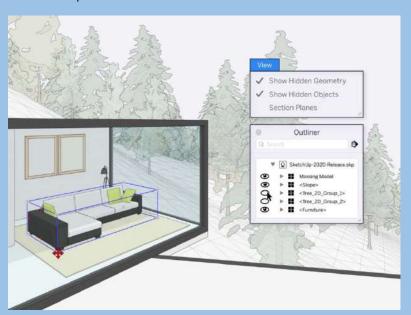
### SketchUp Pro

The most commonly used version ever, you can select SketchUp Pro with your eyes closed if you're ever in doubt about which SketchUp subscription to purchase. The 3D editor becomes a desktop software now (though you can still use it online — but that's not recommended) and gets more out of your hardware engine.

The most prominent feature of the SketchUp Pro version is its support for extension. SketchUp's legendary flexibility comes out it's robust extension support system, and it begins at SketchUp Pro. You can now get onto the customization train and make your SketchUp truly yours — from an organic modeler to a construction specialist to an electrical engineer's playground.

Further on, you get the following bundled with the desktop software in addition to SketchUp – LayOut and Style Builder. Both are insanely useful for professionals in art and engineering alike. You get the same business subscription of Connect as above, but you now get extensive support for may AR apps and devices.

### SketchUp Studio



What do you get when you punch SketchUp Pro and Sefaira together? You get SketchUp Studio, which is, honestly, a little bit above most people's pay grades. Only a company which analyzes building performance and environmental efficiency will need Sefaira – though it is, by itself, a master at its job. Additionally, you get everything you need from the knowledge base.

What if I have an older, fully-purchased version of SketchUp?

You can keep using an older, fully-paidfor version of SketchUp and enjoy whatever features that version offered – you won't be asked any extra money.

However, you won't be able to upgrade to newer versions. Also, save that installer – Trimble will not release those ever again.