

# SketchUp Modeling Tips, Hints and Guidelines

## Manage your objects

All primitive geometry should be created and remain assigned only to *Layer 0*. It should then be made a part of a group or component and assigned to a specific layer to manage their visibility.

## Name your groups and components

Groups and component must have an appropriate name and *IFC* for easier work with *Outliner*, *LayOut* and *BIM*

## Working with materials

Materials should be applied to faces. Applying them to groups would paint the groups default colored faces in the selected color and prohibit you to change the texture coordinates. Every material needs a unique and logical name and only the largest necessary texture size.

## Inserting objects

*CAD* data and *3D Warehouse* models should be inserted in a new SketchUp model. These objects should only be inserted in the working file after checking their scale and deleting unnecessary layers and geometry.

## Working with complex models

When working with complex models, individual parts of the model can be made in a new SketchUp file and then assembled or referenced in the working file as a component.

## Keep it simple

Avoid using excessive arc and circle segment count to keep the model size down and unless needed - don't model parts that won't be seen in the final output.

## Model with solids

Creating objects as solids lets you use and modify them easier. Get to know how to use the Solid tools for a faster workflow. Also remember to keep object front faces on the outside for easier use of stylistic effects and to avoid problems when rendering.

## Use scenes to improve workflow

Use scenes to control layer, shadow, fog and stylistic effect visibility and settings for faster performance and workflow while modeling. This also lets you free up viewport space from dialog boxes and toolbars.

## Use components

Use components above groups when possible to reduce the file size, allow easier editing and more flexible use of objects.

## Model maintenance

All components, materials and styles used in a model are still a part of the SketchUp file even after they have been deleted and left unused in the scene. This leads to an increased file size and lower performance. Use *Purge Unused* or the *Cleanup* plugin to purge, erase stray edges and merge faces regularly.

## Presenting your design

Use scenes to navigate between views, show section cut and shadow study animations and control layer visibility. The scenes will also be available for use in *SketchUp Viewers* and embedded *3D Warehouse* windows. Make great slide-presentations in *LayOut* to compliment the SketchUp presentation. Consider turning off auto-save to avoid performance interruptions when presenting complex models.

## Sharing models

When sending SketchUp files to others, get to know what version of SketchUp they are using. Earlier version of SketchUp can't open newer version files.

## Using scenes from 3D Warehouse models

If you want to use the scenes from *3D Warehouse* models open them separately instead of inserting them in your working file as a component.

## Saving your model

Use *Save A copy As* instead of *Save As* to keep the original file naming when making regular backups.

## Technical Issues

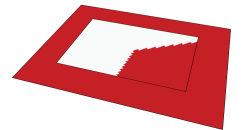
### Camera clipping

To avoid camera clipping issues model close to the axis origin. Clipping can also occur when working in parallel projection mode and if some geometry is located very far from the axis origin.



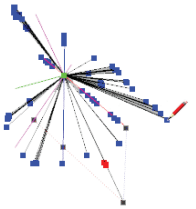
### Face flickering

To avoid face flickering or z-fighting, try raising up, deleting or hiding one of the faces that is on the same plane.



### Cursor trails

If you see cursor trails appearing when working with large models, consider turning off *Fast Feedback* in the OpenGL preferences or updating your video card drivers.



### Disappearing faces

Very tiny objects should be modeled in an oversized scale to avoid face-creation problems.

### Backface color bleeding

When displaying models without edges, you may see backface colors appearing at the object profile edges. Consider changing the color of the backfaces to minimize the effect.

## Useful Links & Shortcuts

### SketchUp downloads & useful sites

[www.sketchup.com/download/all](http://www.sketchup.com/download/all)  
[www.forums.sketchup.com](http://www.forums.sketchup.com)  
[www.blog.sketchup.com](http://www.blog.sketchup.com)

### Shortcuts

H - Hide  
H + Shift - Unhide last  
Shift + Space - Hide rest of model