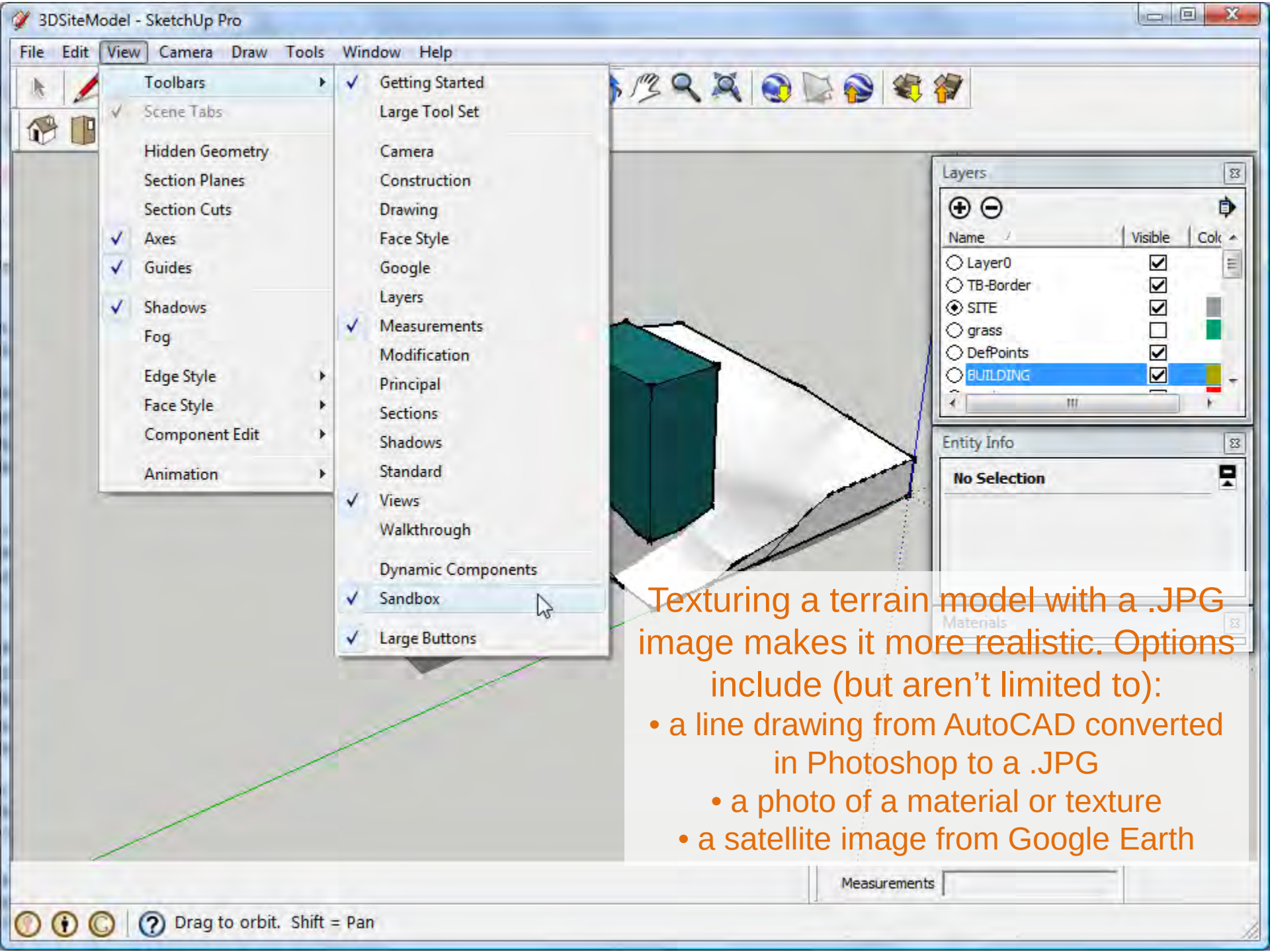
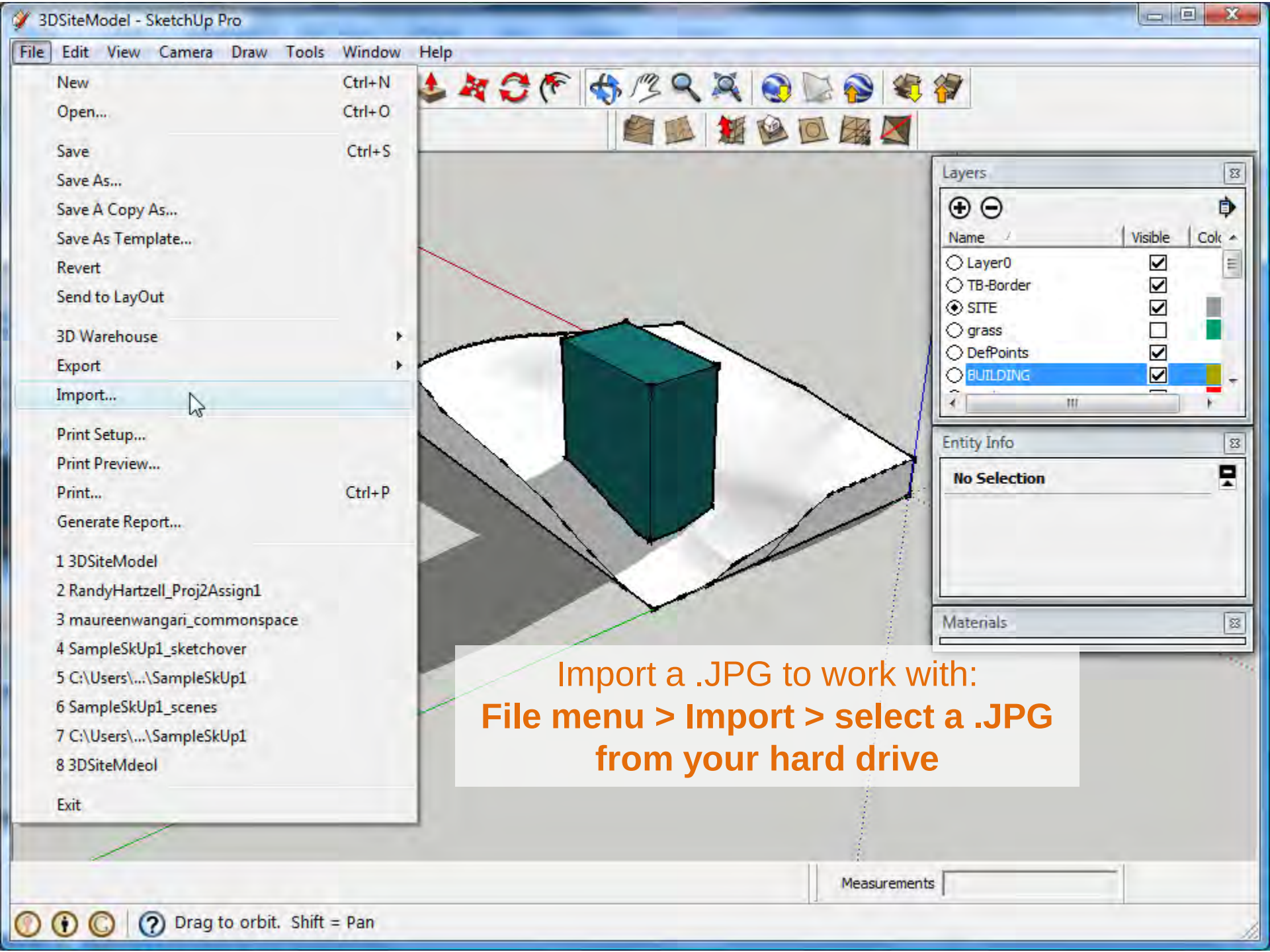
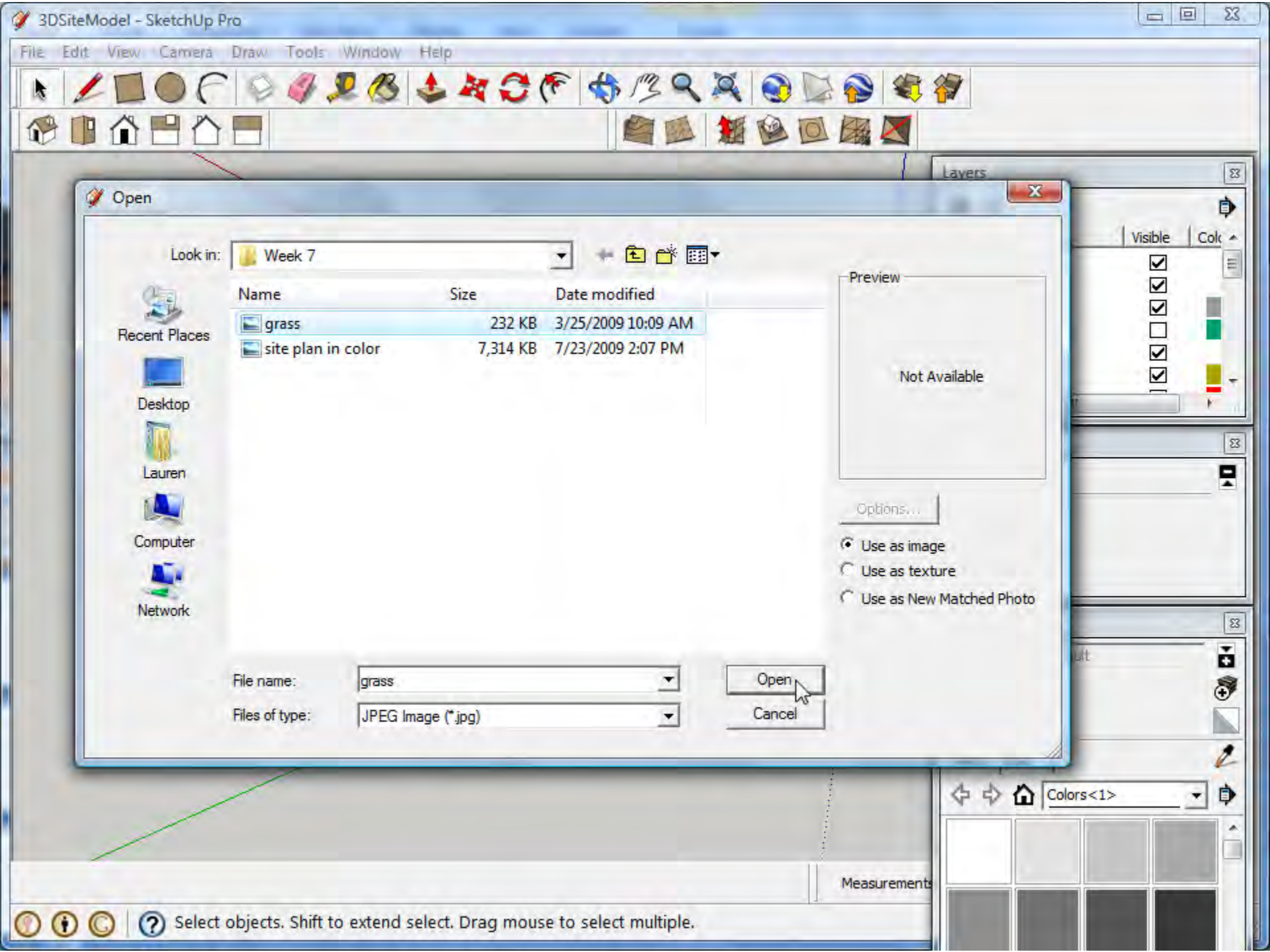
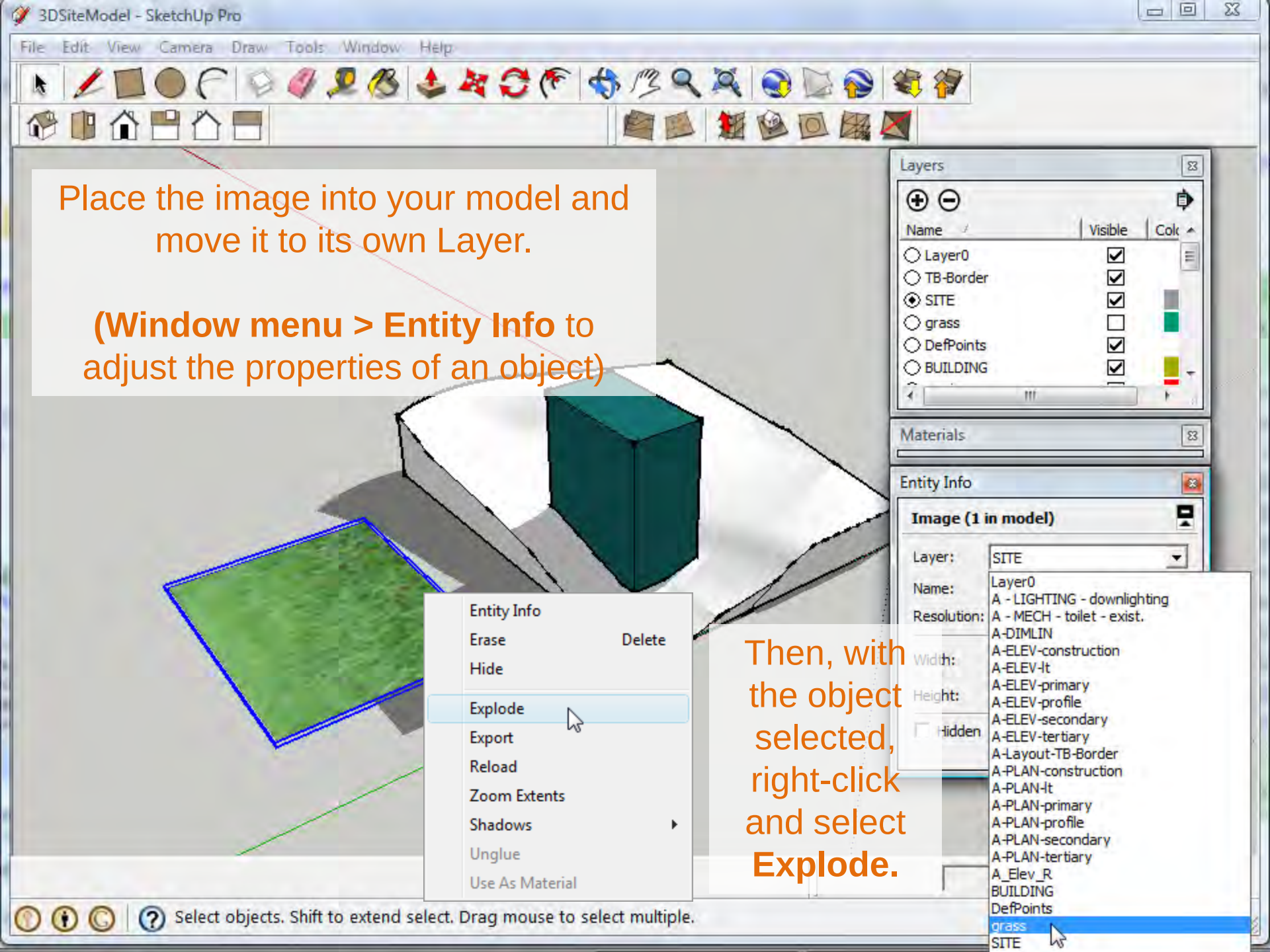
Arch 150
2 Part Tutorial
3D Terrain Models

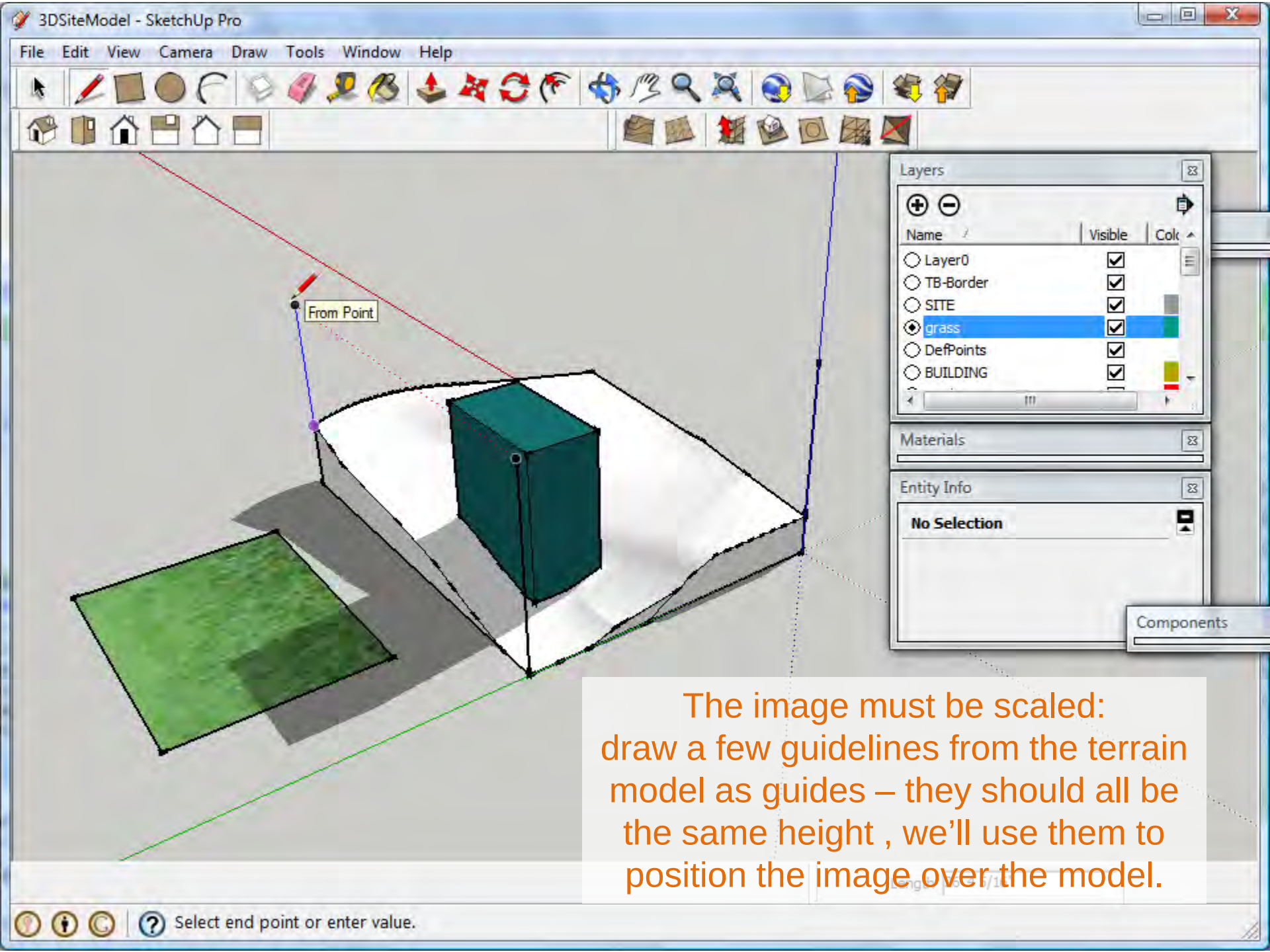
Part 2: Adding texture to the terrain model


3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Toolbars
Scene Tabs
Hidden Geometry
Section Planes
Section Cuts
Axes
Guides
Shadows
Fog
Edge Style
Face Style
Component Edit
Animation
Getting Started
Large Tool Set
Camera
Construction
Drawing
Face Style
Google
Layers
Measurements
Modification
Principal
Sections
Shadows
Standard
Views
Walkthrough
Dynamic Components
Sandbox
Large Buttons
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Entity Info
No Selection
Materials
Texturing a terrain model with a .JPG image makes it more realistic. Options include (but aren't limited to):
• a line drawing from AutoCAD converted in Photoshop to a .JPG
• a photo of a material or texture
• a satellite image from Google Earth
Measurements
Drag to orbit. Shift = Pan

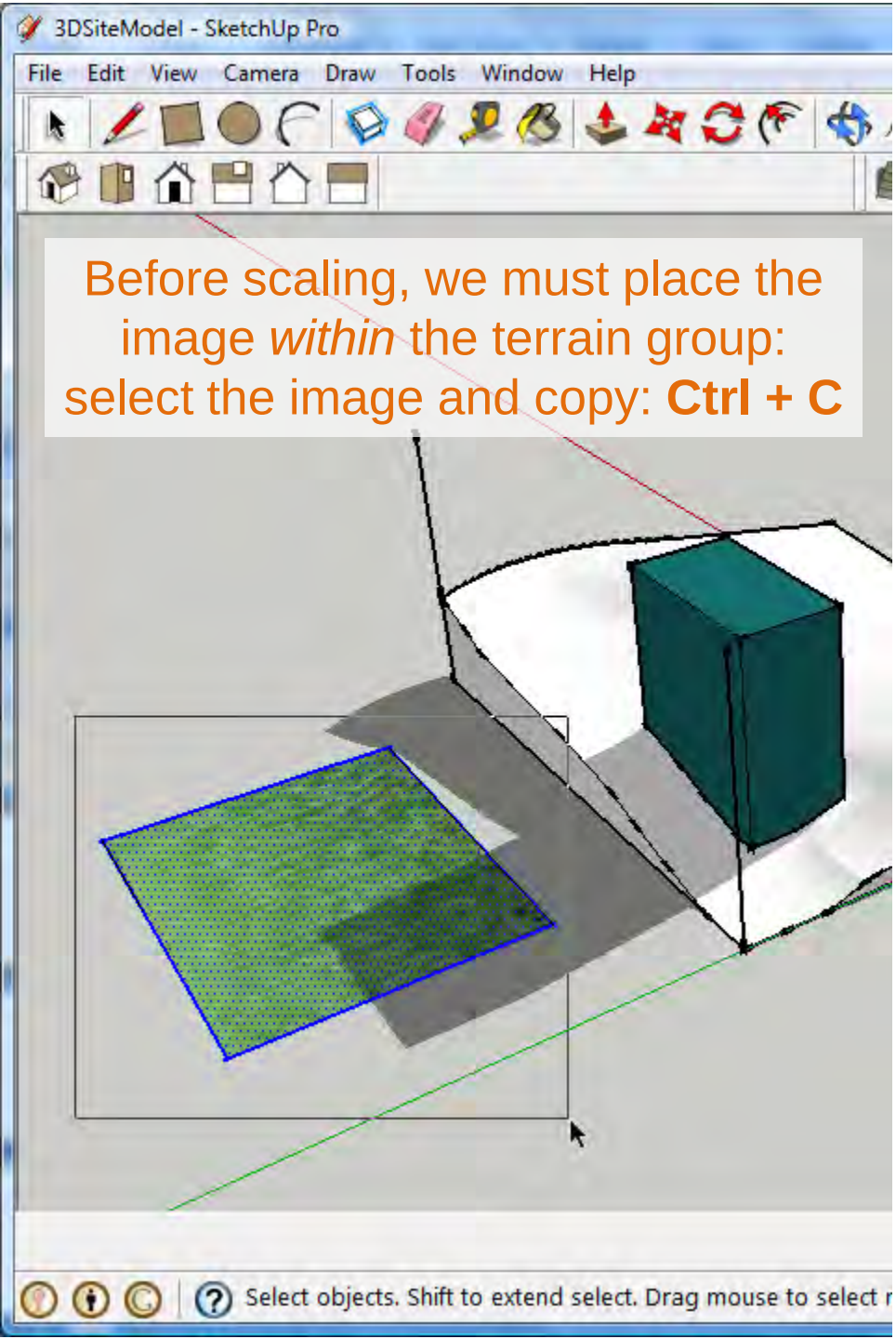

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
New Ctrl+N
Open... Ctrl+O
Save Ctrl+S
Save As...
Save A Copy As...
Save As Template...
Revert
Send to LayOut
3D Warehouse
Export
Import...
Print Setup...
Print Preview...
Print... Ctrl+P
Generate Report...
1 3DSiteModel
2 RandyHartzell_Proj2Assign1
3 maureenwangari_commonspace
4 SampleSkUp1_sketchover
5 C:\Users\...\SampleSkUp1
6 SampleSkUp1_scenes
7 C:\Users\...\SampleSkUp1
8 3DSiteMdeol
Exit
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Entity Info
No Selection
Materials
Import a .JPG to work with:
File menu > Import > select a .JPG
from your hard drive
Measurements
Drag to orbit. Shift = Pan

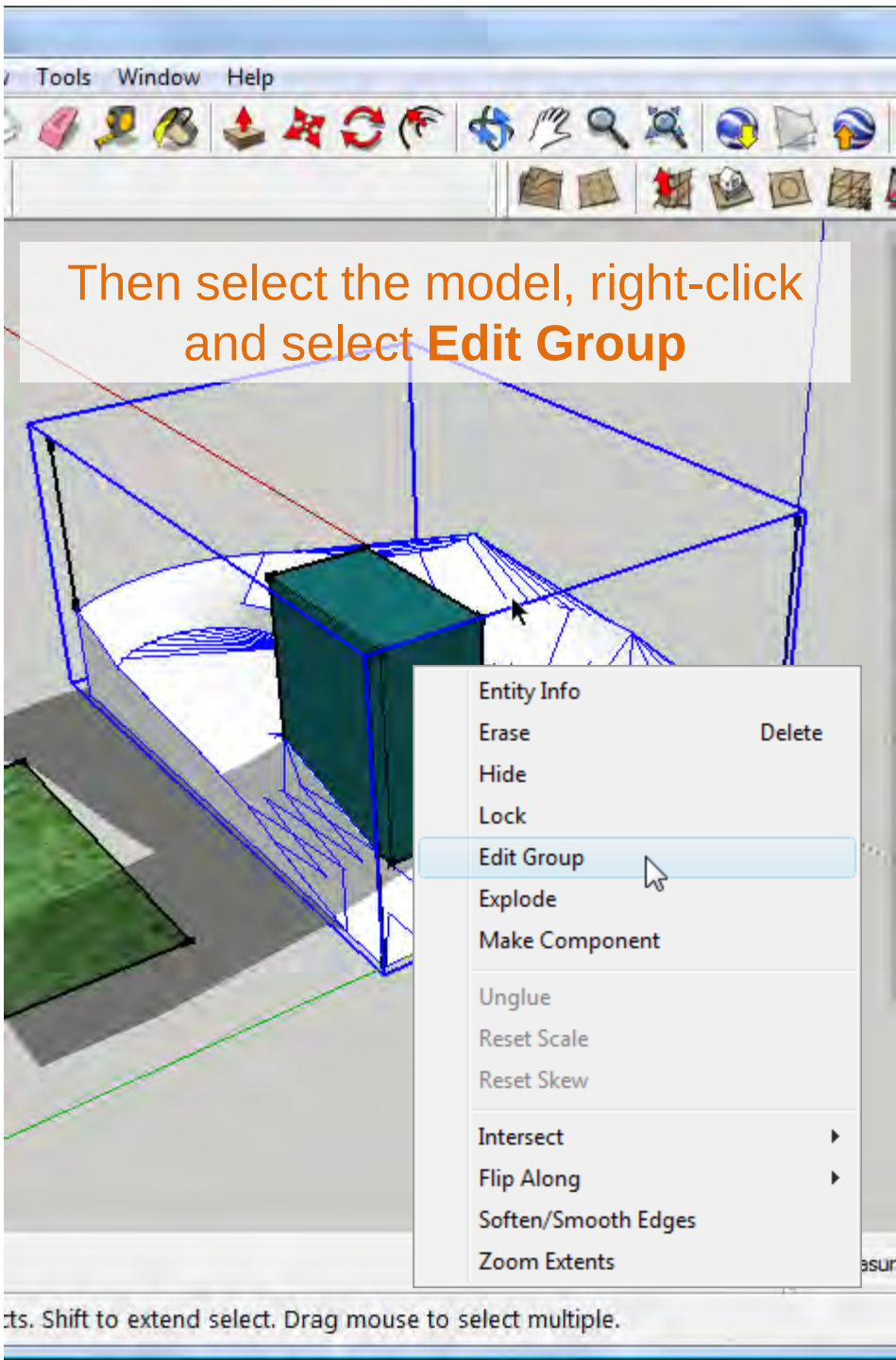

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Layers
Visible
Open
Look in: Week 7
Name Size Date modified
grass 232 KB 3/25/2009 10:09 AM
site plan in color 7,314 KB 7/23/2009 2:07 PM
Recent Places
Desktop
Lauren
Computer
Network
Preview
Not Available
Options...
Use as image
Use as texture
Use as New Matched Photo
File name: grass
Files of type: JPEG Image (*.jpg)
Open
Cancel
Colors<1>
Measurements
Select objects. Shift to extend select. Drag mouse to select multiple.

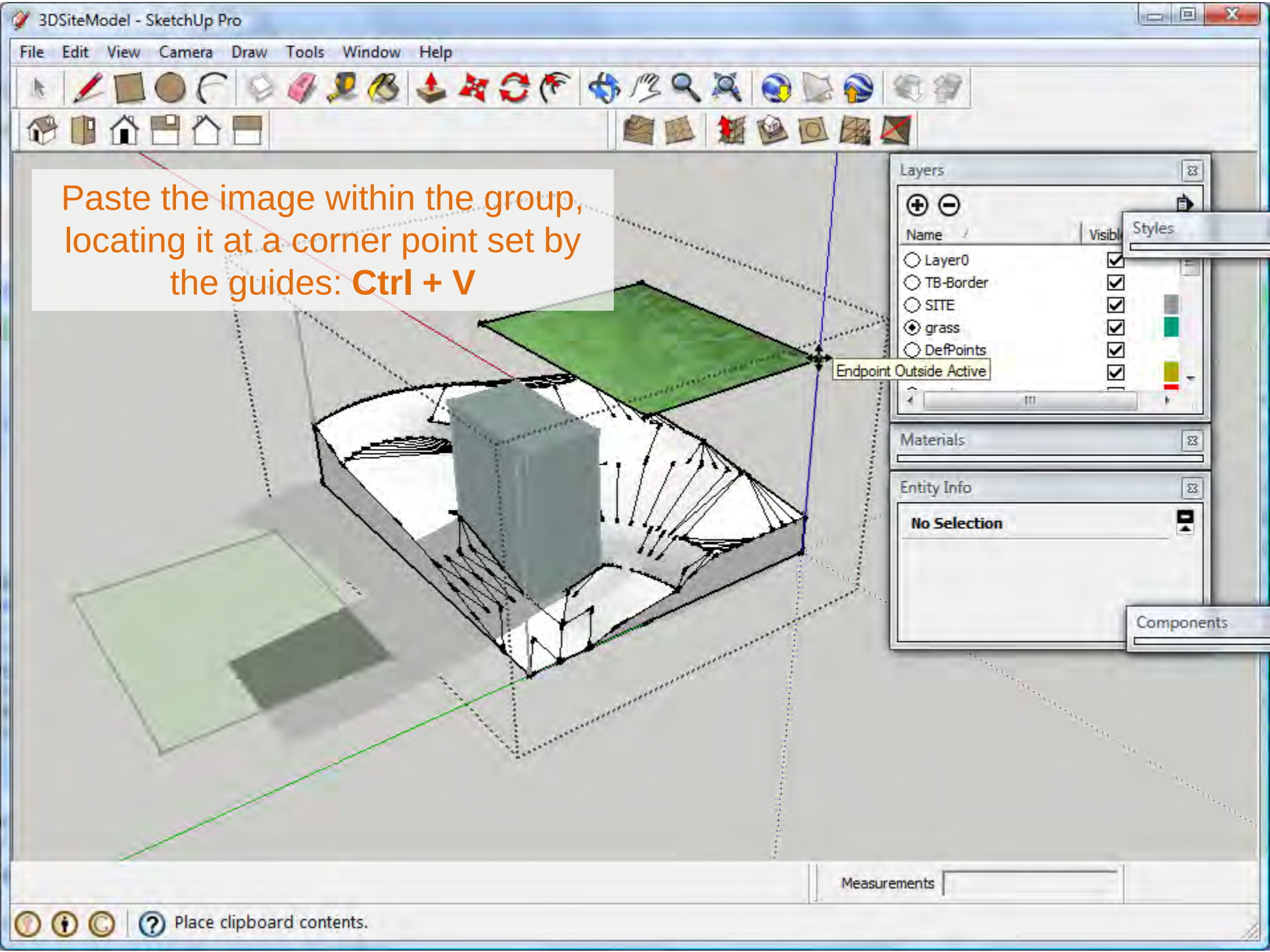

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Place the image into your model and move it to its own Layer.
(Window menu > Entity Info to adjust the properties of an object)
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Materials
Entity Info
Image (1 in model)
Layer:
SITE
Name:
Resolution:
Width:
Height:
Hidden
Entity Info
Erase
Delete
Hide
Explode
Export
Reload
Zoom Extents
Shadows
Unglue
Use As Material
Then, with the object selected, right-click and select Explode.
Layer0
A - LIGHTING - downlighting
A - MECH - toilet - exist.
A-DIMLIN
A-ELEV-construction
A-ELEV-lt
A-ELEV-primary
A-ELEV-profile
A-ELEV-secondary
A-ELEV-tertiary
A-Layout-TB-Border
A-PLAN-construction
A-PLAN-lt
A-PLAN-primary
A-PLAN-profile
A-PLAN-secondary
A-PLAN-tertiary
A_Elev_R
BUILDING
DefPoints
grass
SITE
Select objects. Shift to extend select. Drag mouse to select multiple.

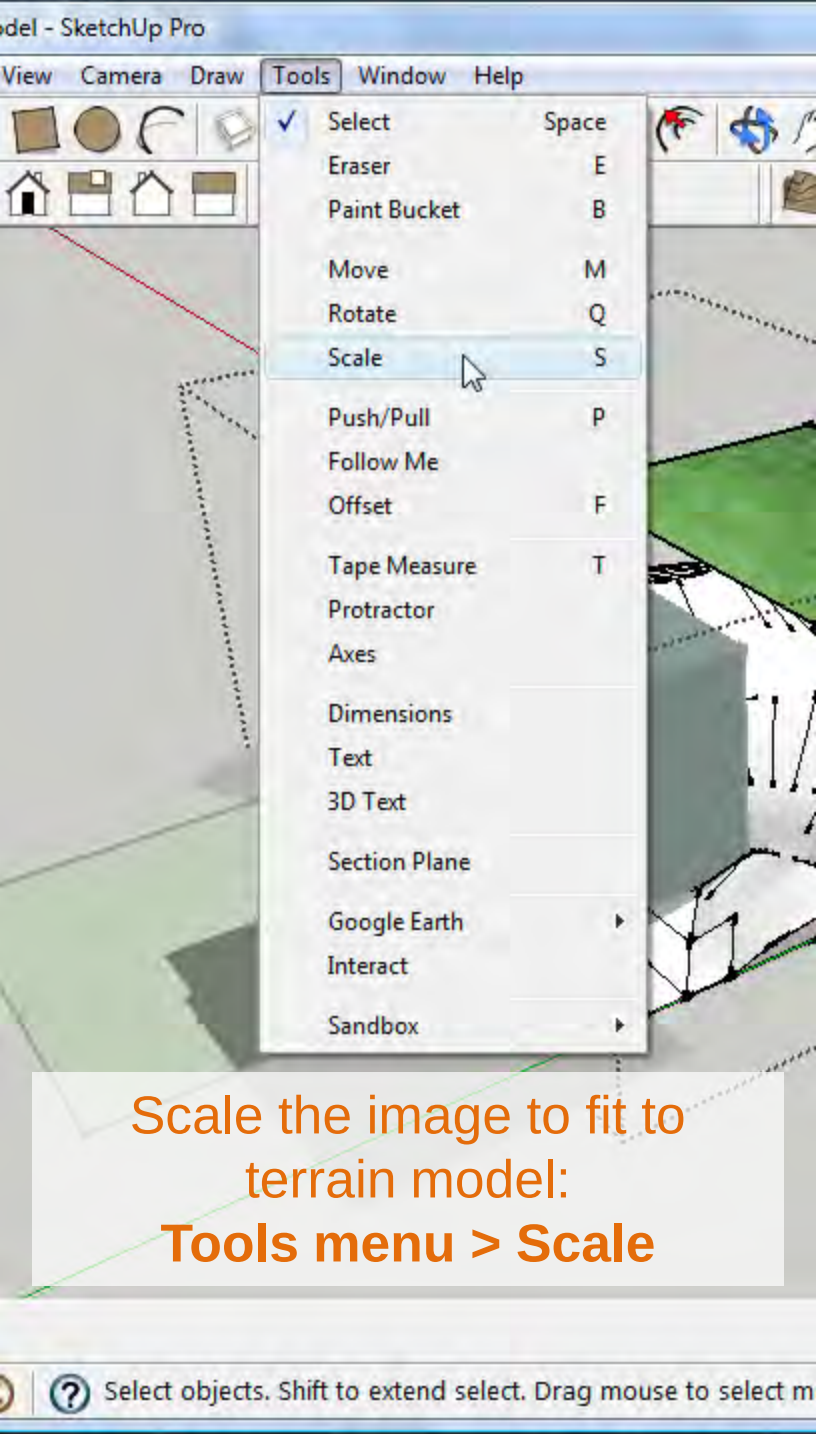


The image must be scaled:
draw a few guidelines from the terrain model as guides – they should all be the same height , we'll use them to position the image over the model.

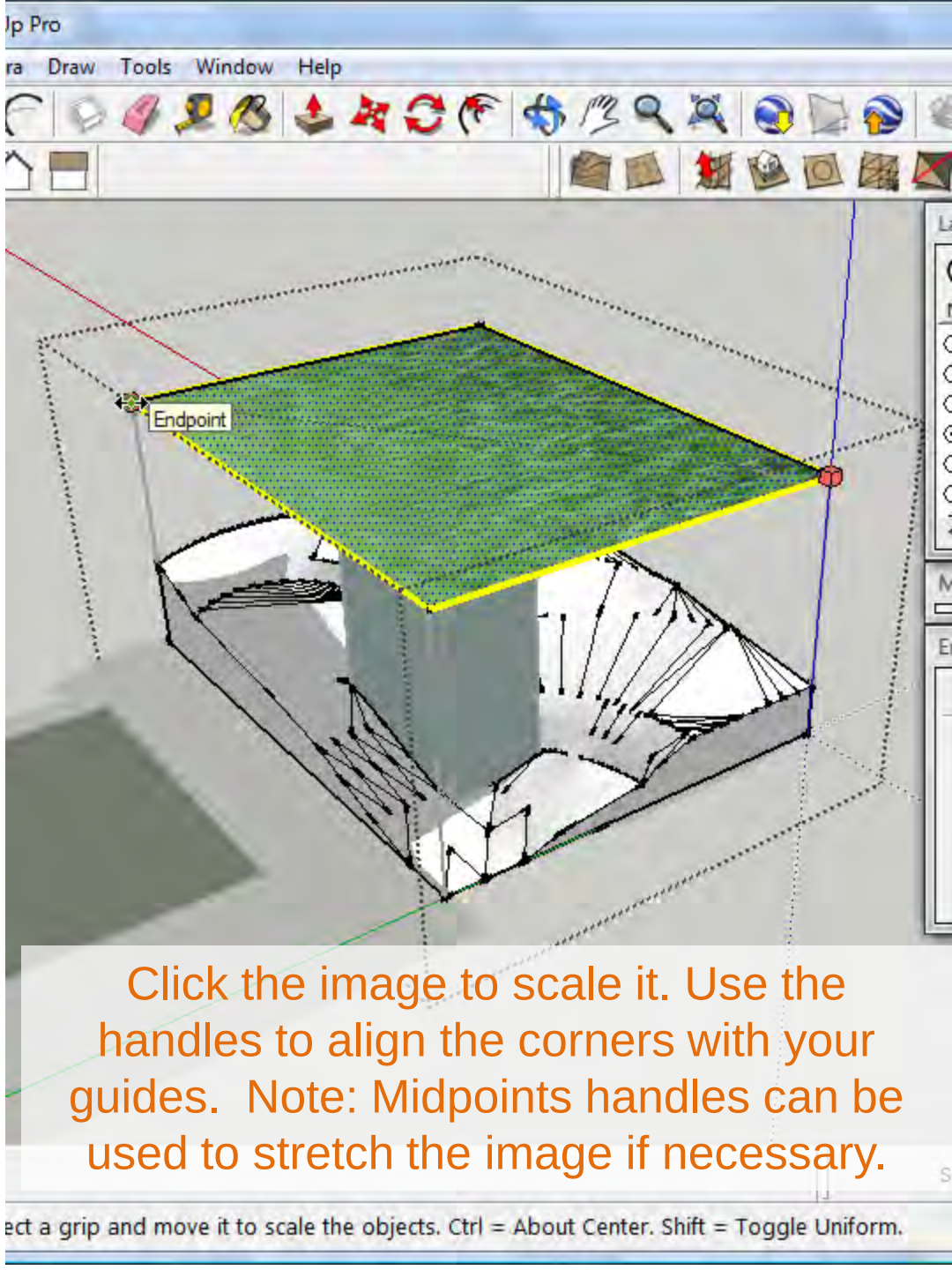

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Before scaling, we must place the image *within* the terrain group: select the image and copy: **Ctrl + C**
Select objects. Shift to extend select. Drag mouse to select


Tools Window Help
Then select the model, right-click and select **Edit Group**
Entity Info
Erase Delete
Hide
Lock
Edit Group
Explode
Make Component
Unglue
Reset Scale
Reset Skew
Intersect
Flip Along
Soften/Smooth Edges
Zoom Extents
ts. Shift to extend select. Drag mouse to select multiple.

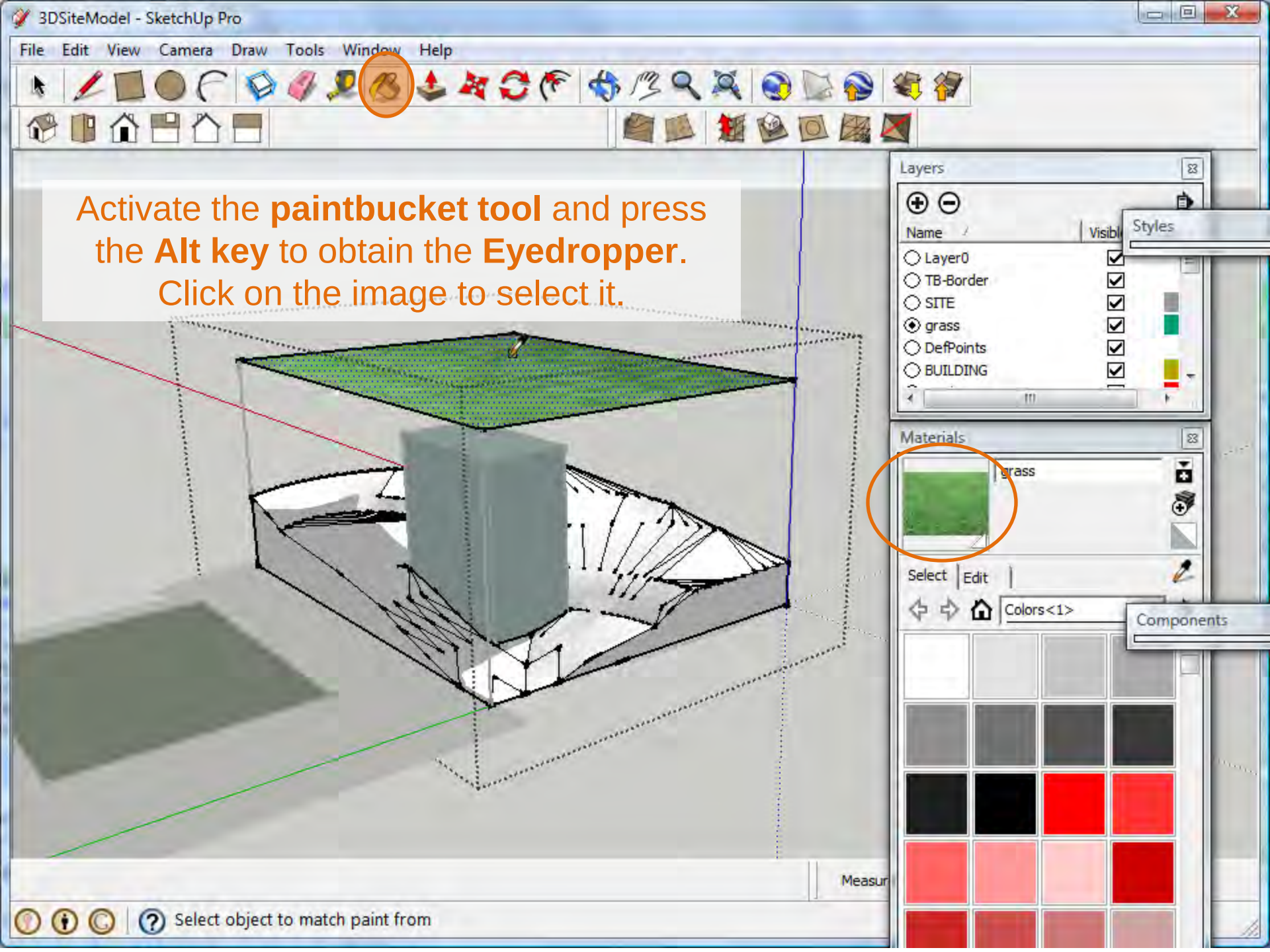

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Paste the image within the group, locating it at a corner point set by the guides: **Ctrl + V**
Layers
Name
Layer0
TB-Border
SITE
grass
DefPoints
Endpoint Outside Active
Styles
Materials
Entity Info
No Selection
Components
Measurements
Place clipboard contents.

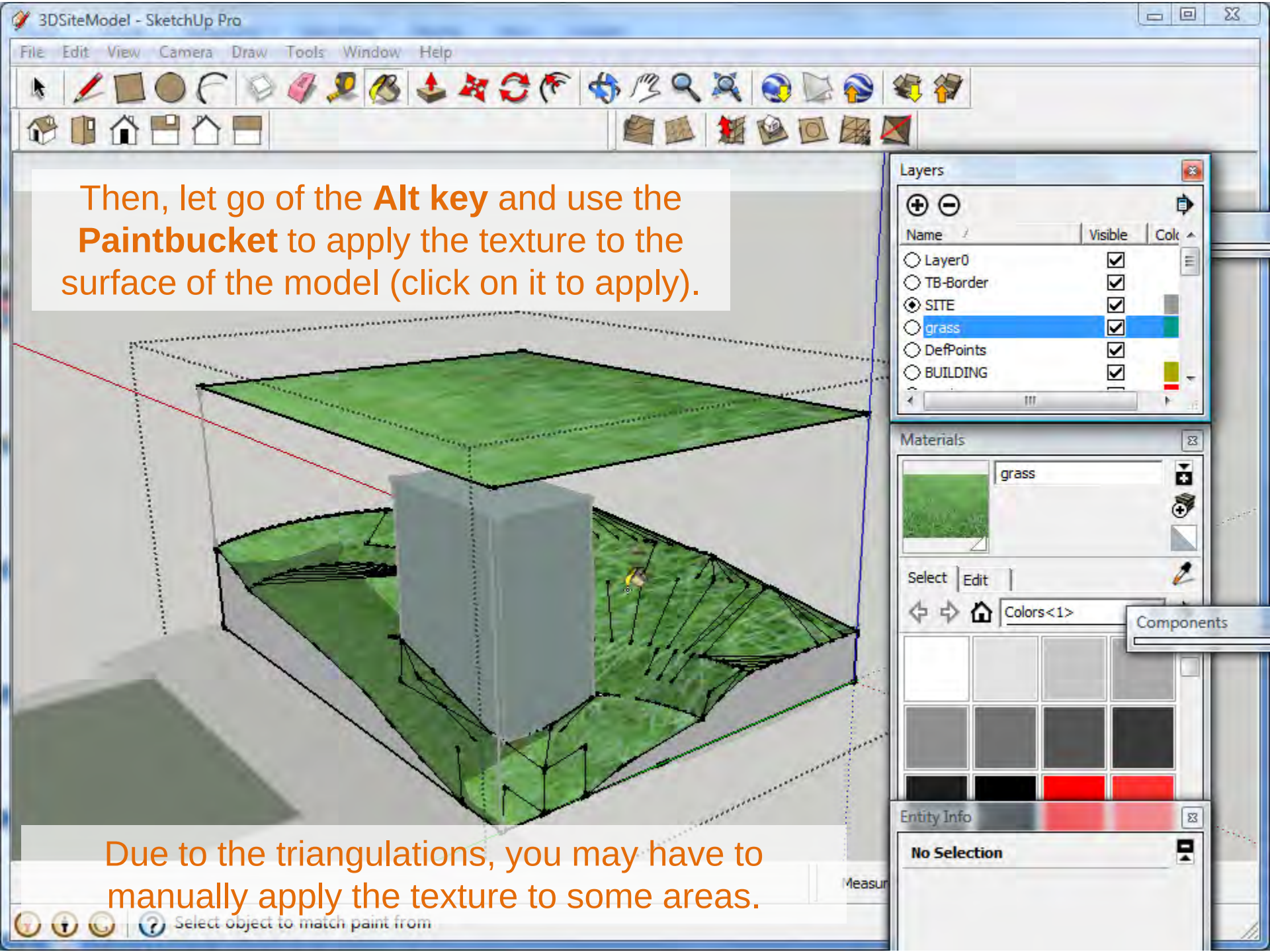


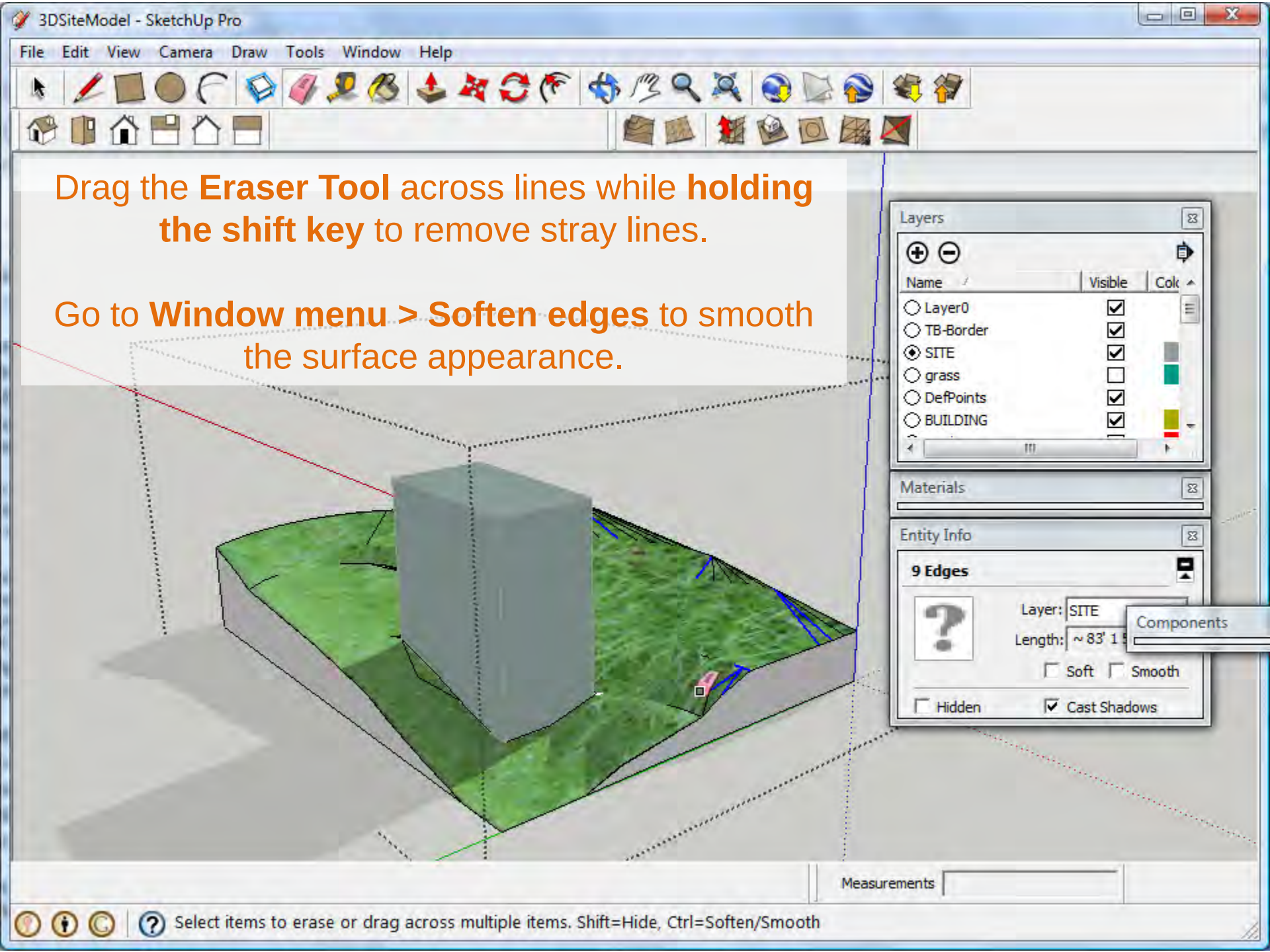
Scale the image to fit to terrain model:
Tools menu > Scale

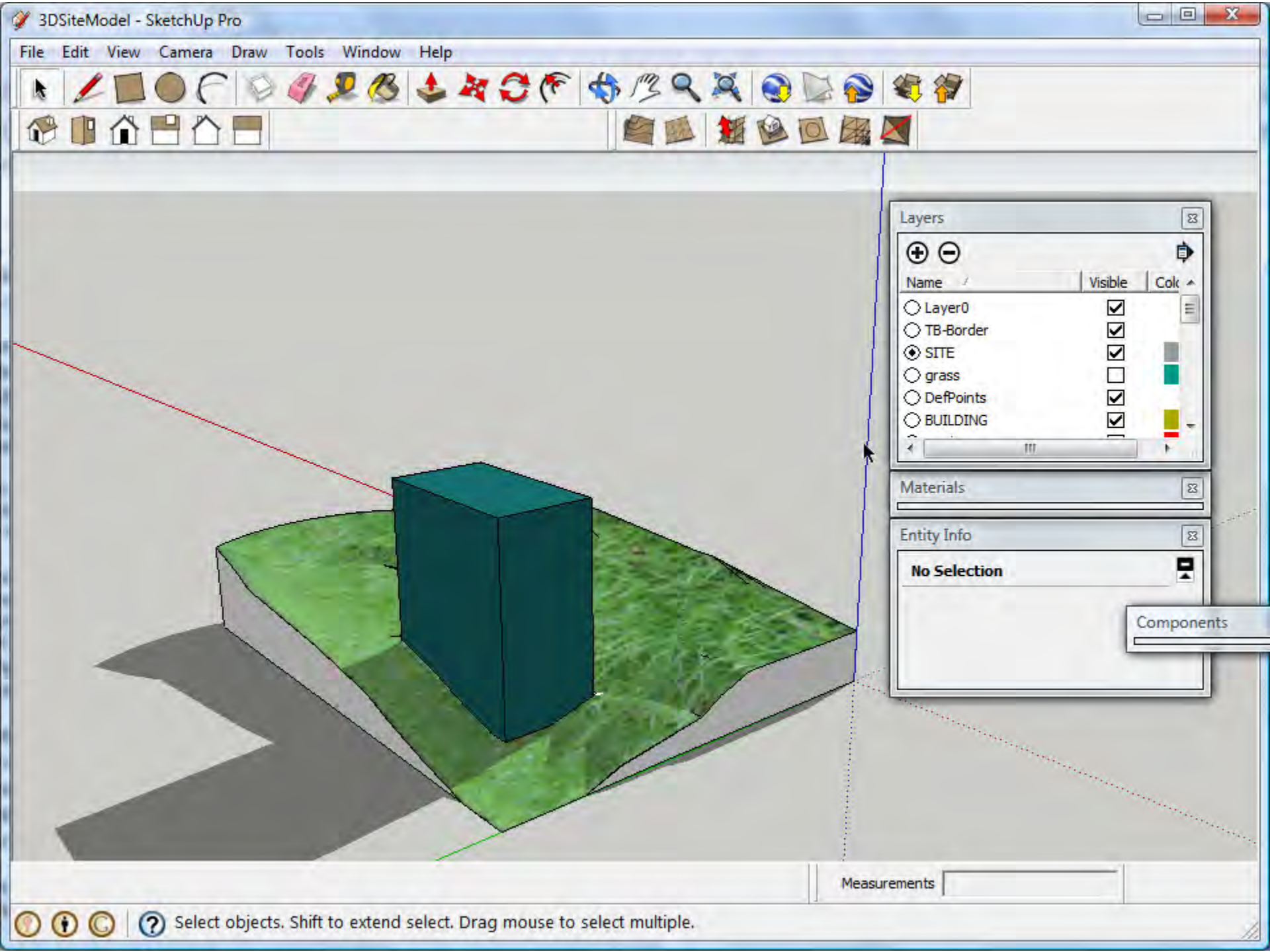


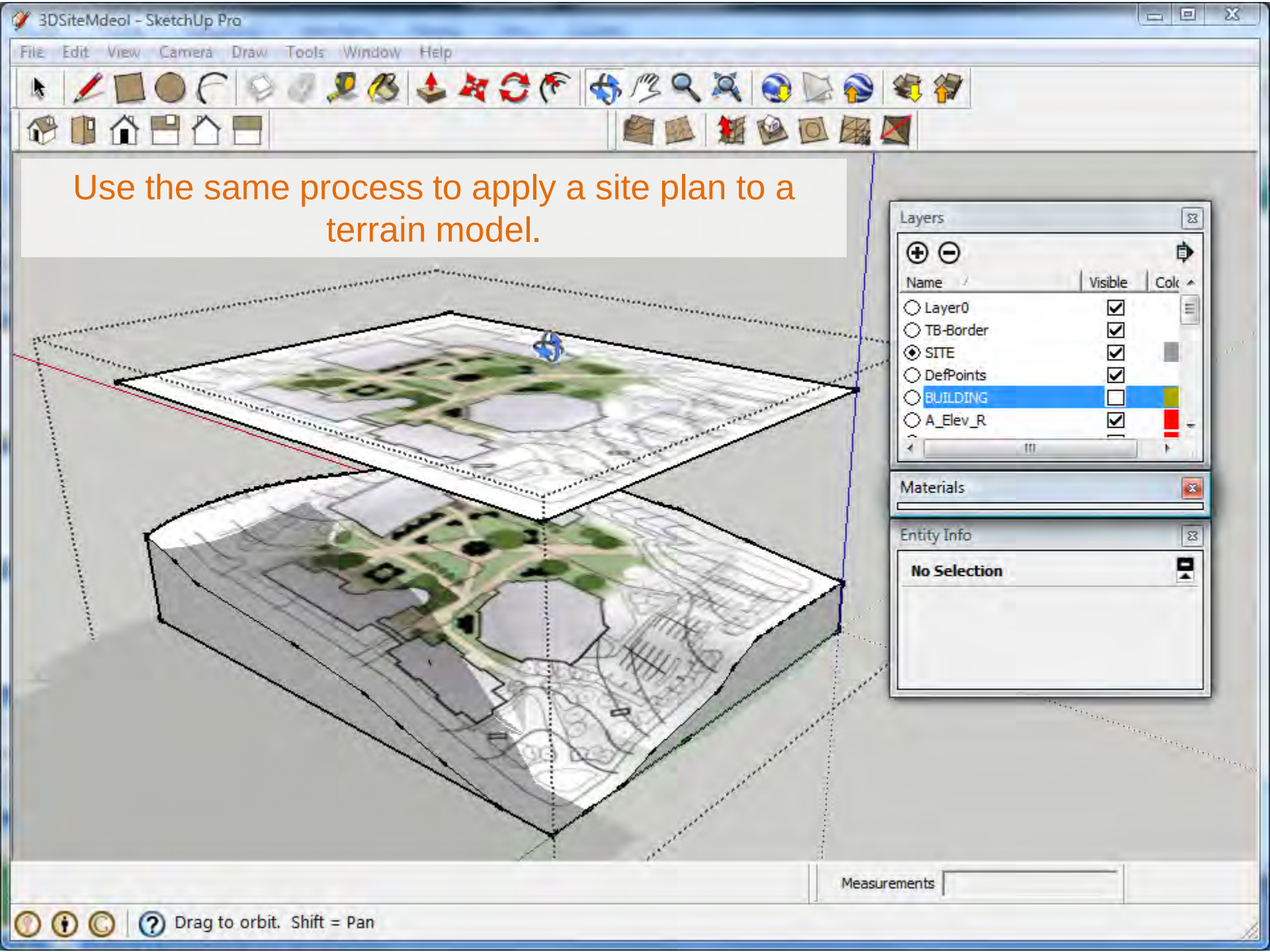
Click the image to scale it. Use the handles to align the corners with your guides. Note: Midpoints handles can be used to stretch the image if necessary.

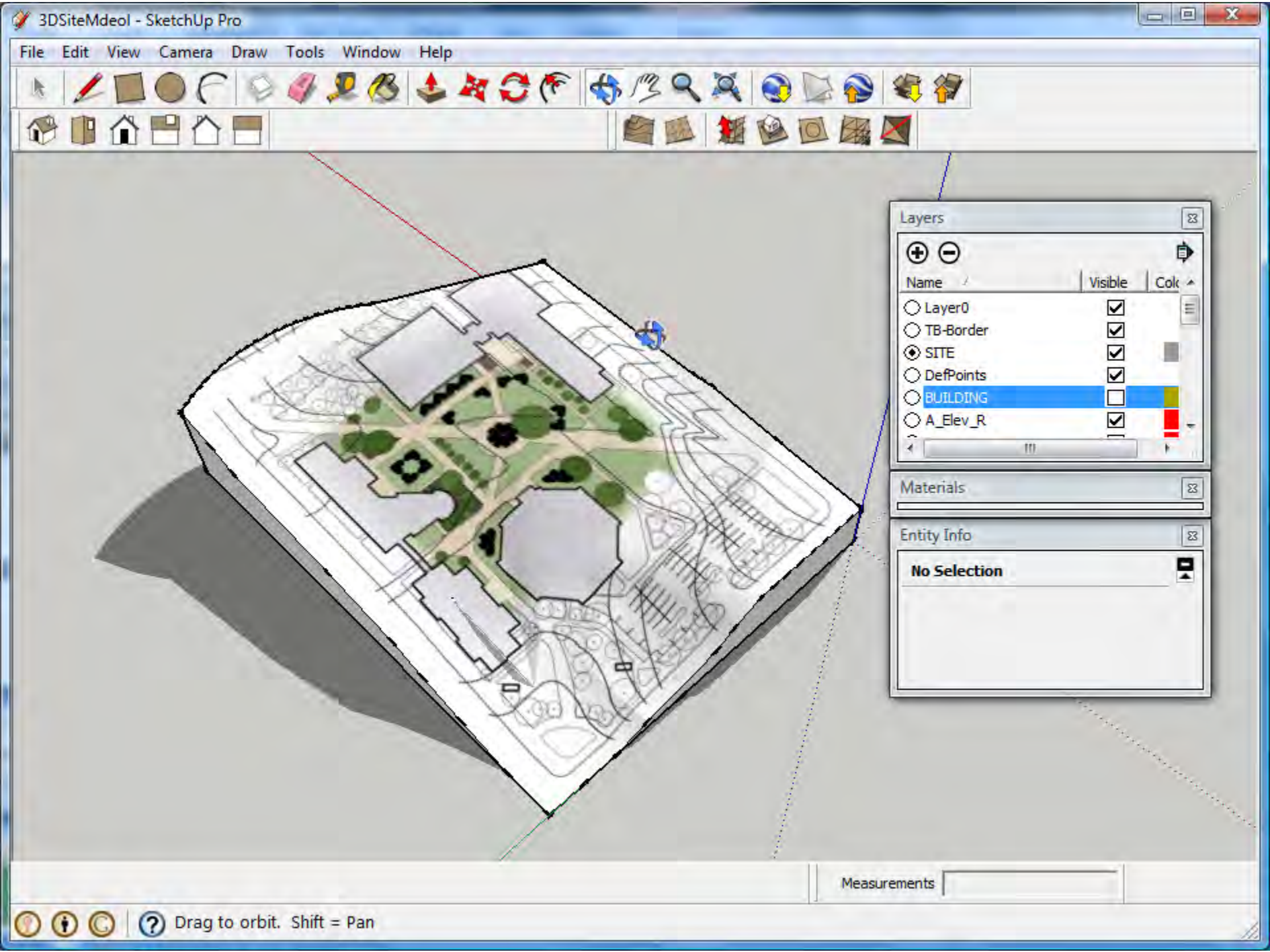

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Activate the **paintbucket tool** and press the **Alt key** to obtain the **Eyedropper**.
Click on the image to select it.
Layers
Name
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Styles
Materials
grass
Select
Edit
Colors<1>
Components
Select object to match paint from

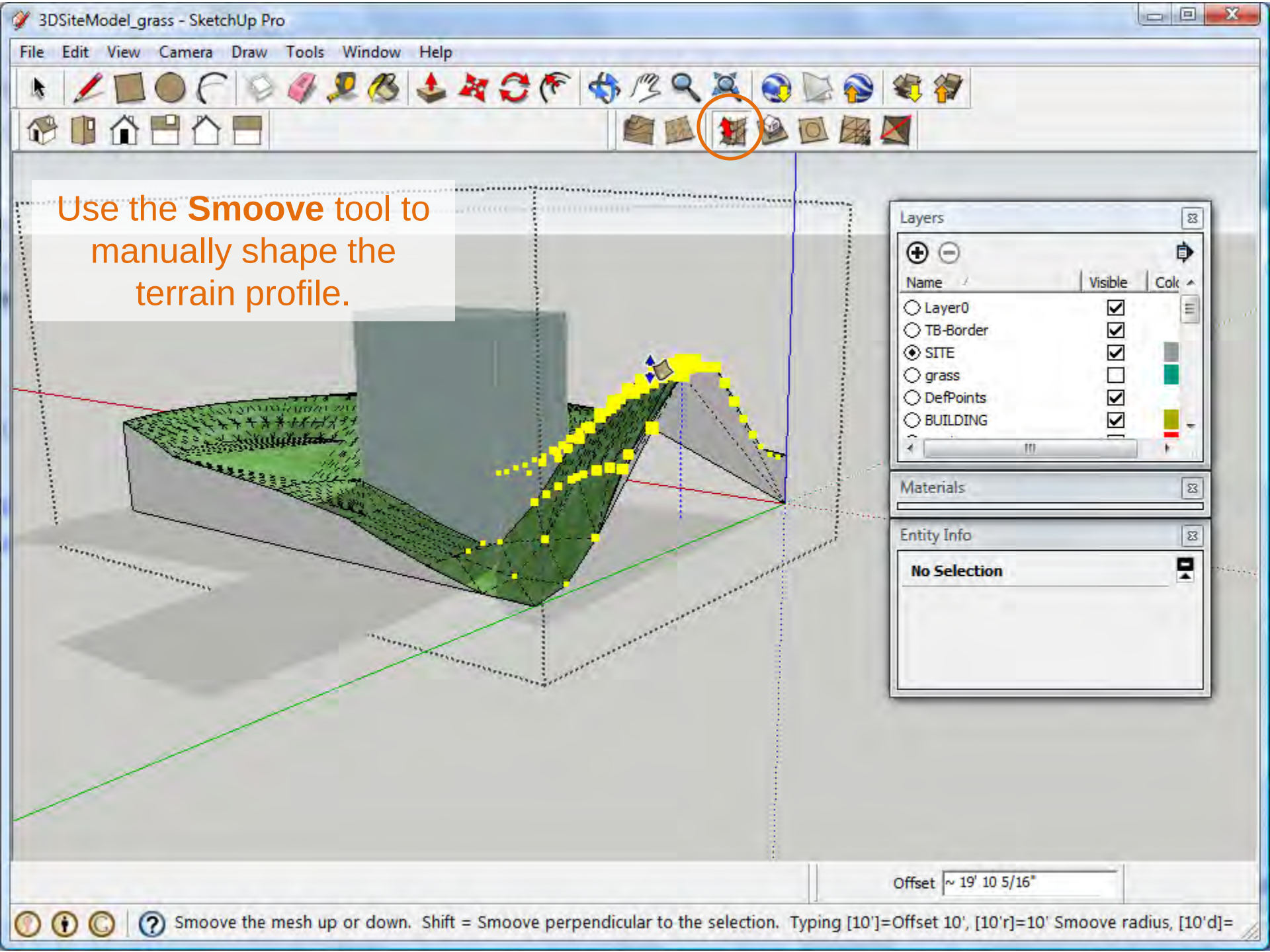

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Then, let go of the **Alt key** and use the **Paintbucket** to apply the texture to the surface of the model (click on it to apply).
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Materials
grass
Select
Edit
Colors<1>
Components
Entity Info
No Selection
Due to the triangulations, you may have to manually apply the texture to some areas.
Select object to match paint from

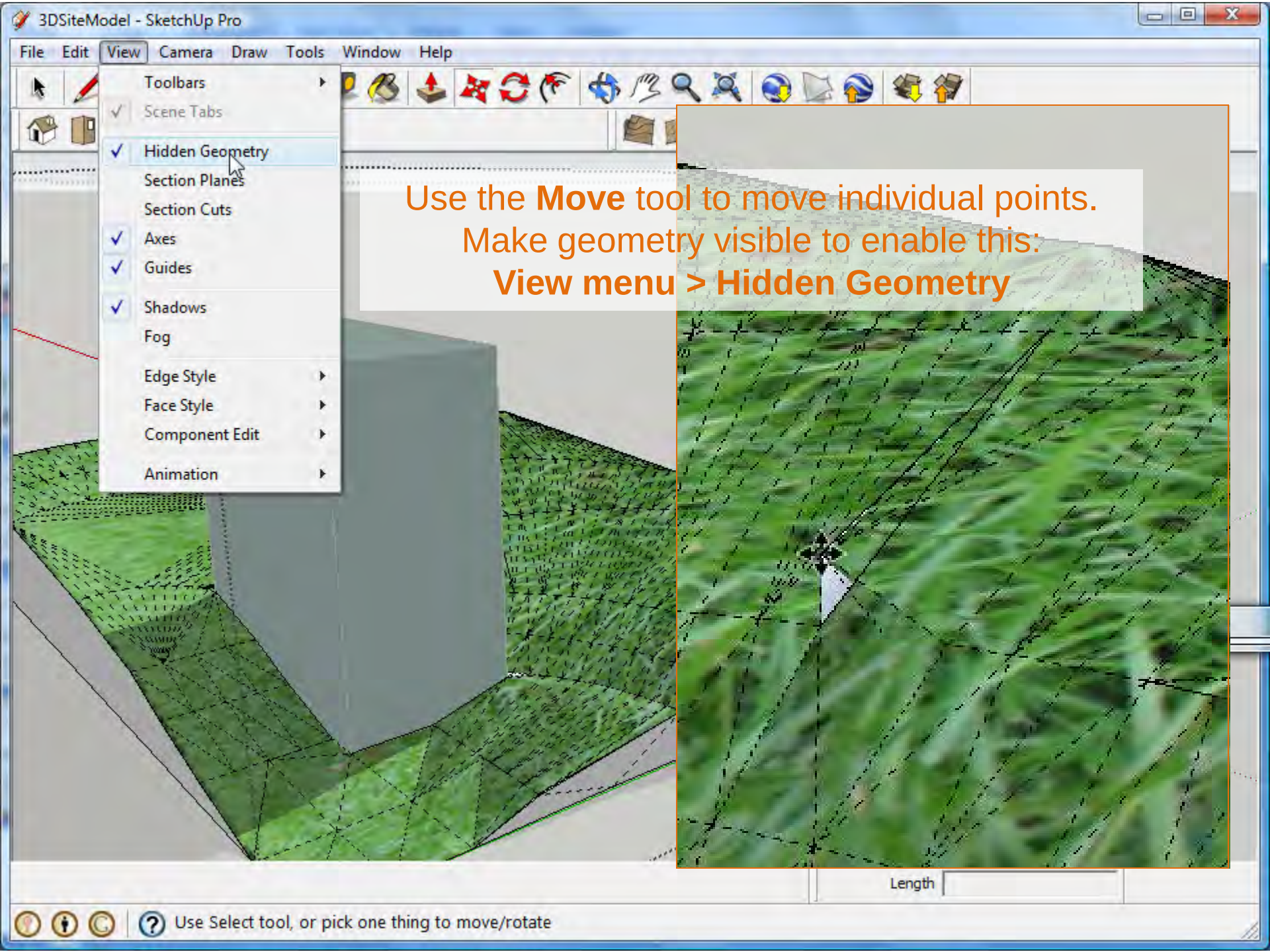

3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Drag the **Eraser Tool** across lines while **holding the shift key** to remove stray lines.
Go to **Window menu > Soften edges** to smooth the surface appearance.
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Materials
Entity Info
9 Edges
Layer: SITE
Length:
Components
Soft
Smooth
Hidden
Cast Shadows
Measurements
Select items to erase or drag across multiple items. Shift=Hide, Ctrl=Soften/Smooth


3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Layers
Name
Visible
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Materials
Entity Info
No Selection
Components
Measurements
Select objects. Shift to extend select. Drag mouse to select multiple.


3DSiteMdeol - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Use the same process to apply a site plan to a terrain model.
Layers
Name
Visible
Layer0
TB-Border
SITE
DefPoints
BUILDING
A_Elev_R
Materials
Entity Info
No Selection
Measurements
Drag to orbit. Shift = Pan


3DSiteMdeol - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Layers
Name Visible Col
Layer0
TB-Border
SITE
DefPoints
BUILDING
A_Elev_R
Materials
Entity Info
No Selection
Measurements
Drag to orbit. Shift = Pan


3DSiteModel_grass - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Use the **Smoove** tool to manually shape the terrain profile.
Layers
Name Visible Col
Layer0
TB-Border
SITE
grass
DefPoints
BUILDING
Materials
Entity Info
No Selection
Offset ~ 19' 10 5/16"
Smoove the mesh up or down. Shift = Smoove perpendicular to the selection. Typing [10']=Offset 10', [10'r]=10' Smoove radius, [10'd]=


3DSiteModel - SketchUp Pro
File Edit View Camera Draw Tools Window Help
Toolbars
Scene Tabs
Hidden Geometry
Section Planes
Section Cuts
Axes
Guides
Shadows
Fog
Edge Style
Face Style
Component Edit
Animation
Use the Move tool to move individual points.
Make geometry visible to enable this:
View menu > Hidden Geometry
Length
Use Select tool, or pick one thing to move/rotate

For next week, revise the topography model developed in this week's class and add your shade structure design to it.

Keep the surrounding contextual buildings *neutral (white or gray)* to allow focus to be on your design work.