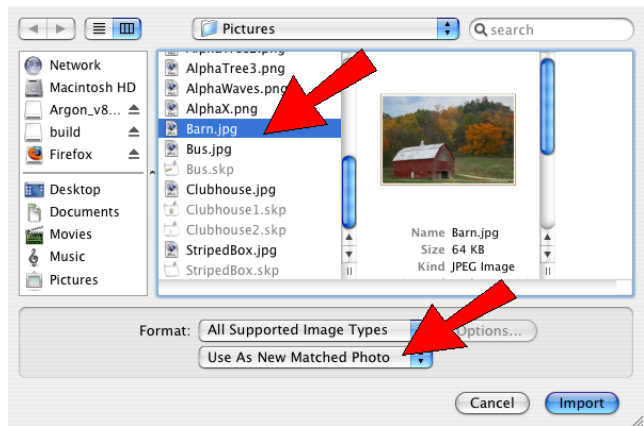


In this chapter, we'll use lots of pictures to create a barn, fence, and some animals and people. We will also add three objects we made in Chapters 1, 2, and 3 (the striped box, bus, and clubhouse).

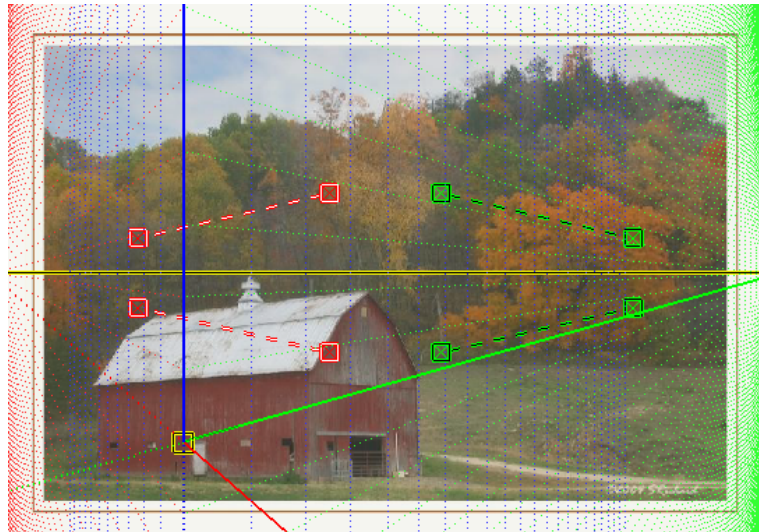


## Make the Barn

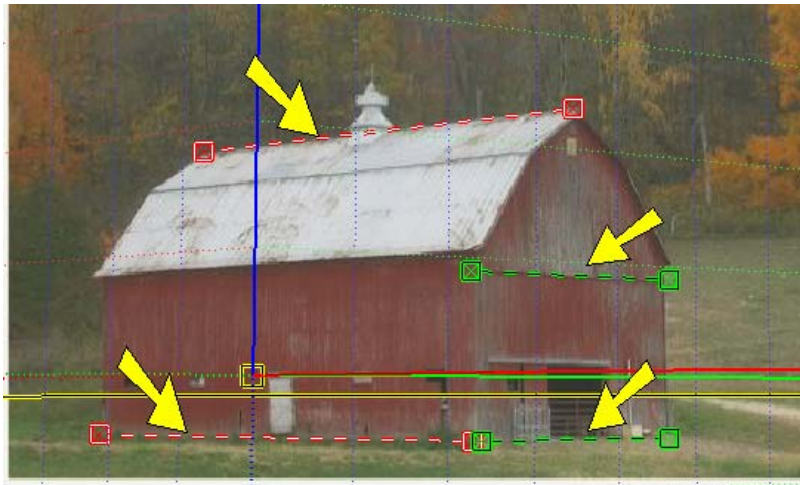
1. We'll use Photo Match to make the barn. Start a new file and use File / Import to find "Barn.jpg" and check **Use as New Matched Photo**.



This is how the barn picture looks when you bring it in.



2. Move the red and green axis bars like this.



3. Move the origin (the yellow square) to the front corner of the barn, at the very bottom of the barn.

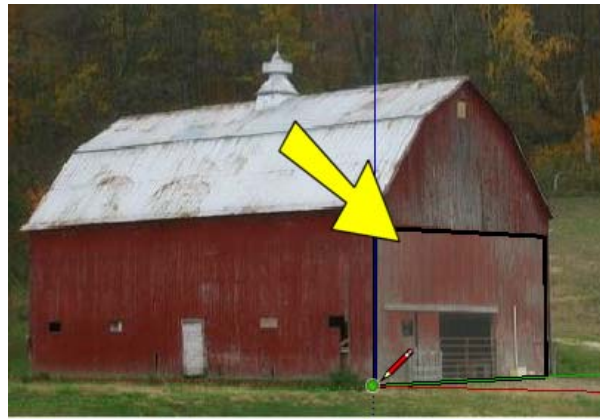


4. **Right-click on the picture and choose Done.**

5. Sometimes it's hard to use Rectangle on a picture like this. So use Line instead. Start with these two lines: the first one goes straight up (blue direction) and the second line goes in the green direction.



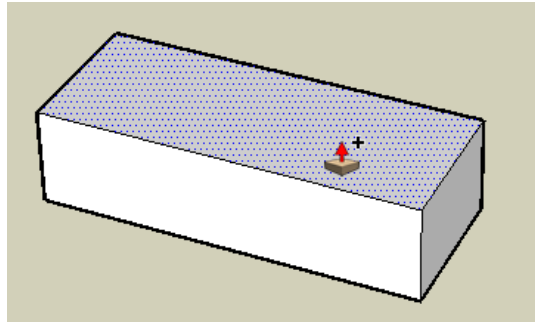
6. Finish the front of the barn with another line straight down, then draw the last line to close the rectangle.



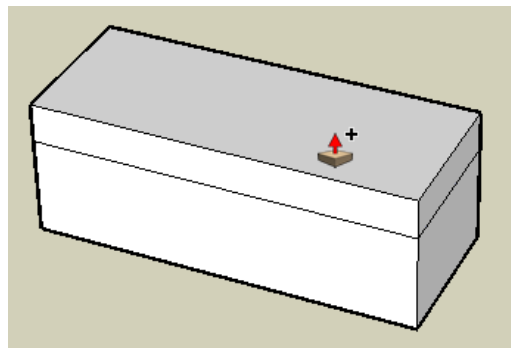
7. Push/Pull this rectangle to the back of the barn.



8. Keep Push/Pull active. We need to pull the top of this box up, but we can't see the top face in this view. So orbit around so that you can see the top. Press Option so that you'll start a new box (you'll see a "plus" sign attached to the cursor symbol). This means you won't just make the box taller - you'll make a new box on top of it.



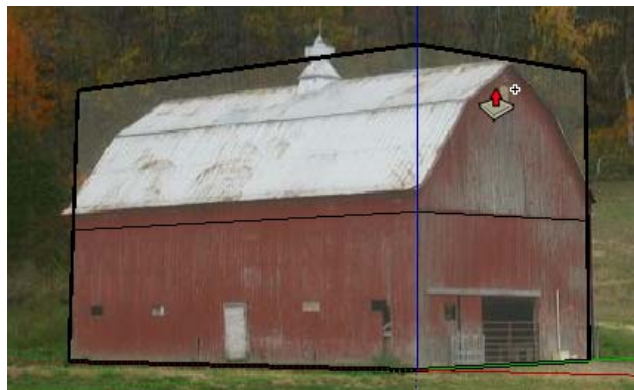
9. Start to pull up the top, but don't click to finish yet.



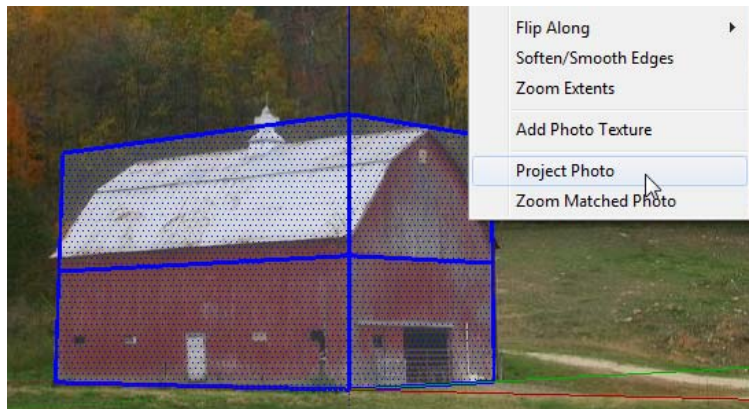
10. While you're still in the middle of Push/Pull, click the "barn" tab.



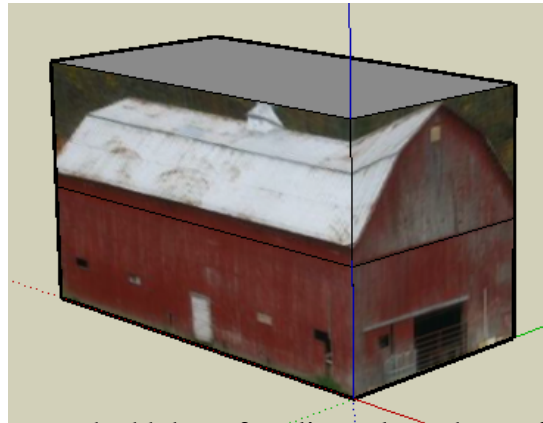
11. Now you can pull up the box to match the picture - stop at the tip of the roof (we can ignore the weather vane at the top).



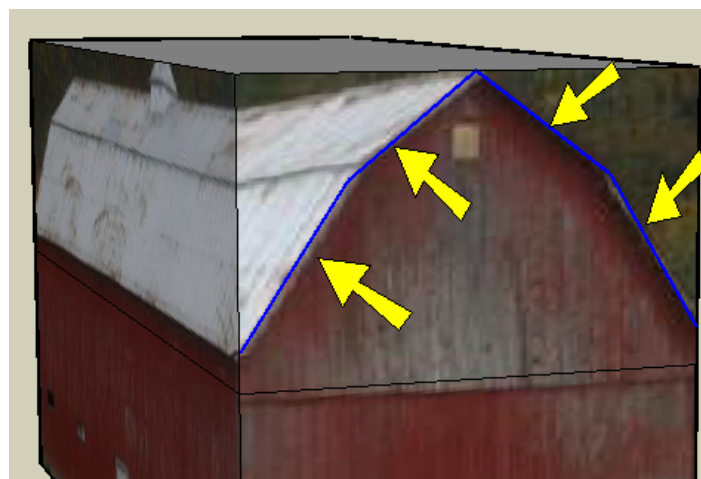
12. In the last chapter we used the Match Photo window to paint several faces at once - here's another way. Activate Select and press **Cmd + A** (or use a selection window) to select everything. Right-click on any selected face and choose **Project Photo**.



The front and side faces have the barn picture painted on them, as you can see if you orbit out of the view.



13. Orbit so you can see the front, and add these four lines along the roof, shown below in blue.



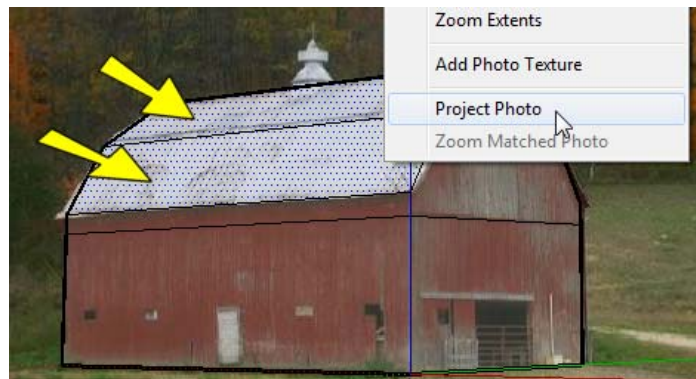
14. Push/Pull the extra stuff back, to make the roof shape. The picture on the roof looks like a mess.



15. To fix the roof faces, click the “barn” tab to get the picture back.



16. Select both of the roof faces, and right-click on either of them and choose **Project Photo**.



17. Answer Yes to overwrite materials, and now the roof looks right.



18. Paint the roof and sides on the other side, using the eyedropper. You may have to use texture positioning to get the pictures just right.



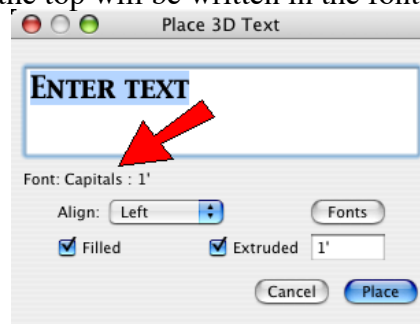
## Add Text

In this section we'll add some words to the front of the barn.

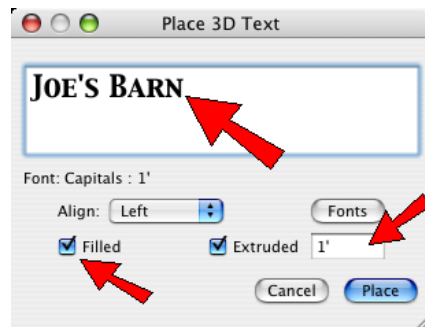
1. Click 3D Text.



2. I'm using the font called "Capitals" with letters 1 foot tall, but pick any font you like. The words "Enter Text" in the big box at the top will be written in the font you pick.



3. In the large empty box, type the words you want on the barn. I'm writing "Joe's Barn." Check Filled so that the letters will be filled in, and check Extruded so they will stick out. Next to Extruded, type 1' (don't forget the apostrophe) so the letters will stick out one foot.



4. Click Place, then click somewhere on the front face to place your text. The words might be too big or too small, but we can change the size.



5. To change the size, click Scale.



6. To stretch or squash the letters so they'll fit on the barn, click and drag the middle drag handle on this side.





- To make the letters taller or shorter, click and drag the middle drag handle on the top. You can keep playing with the drag handles to see how the letters change.



- Pick a color (I'm using yellow) and click any of the letters. They all turn yellow. This is because the text is a component, and it all gets painted at once.



- We want to paint a different color on the front of each letter, so right-click on the text and choose **Explode**.



10. Now you can paint the front of each letter a new color. You can make each letter a different color, if you want.

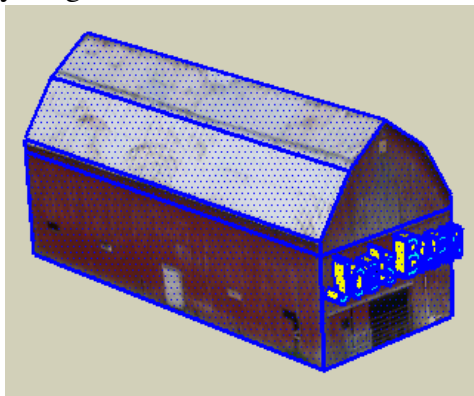


You don't actually have to explode the text. You could edit the component instead, then close it when you're done painting.

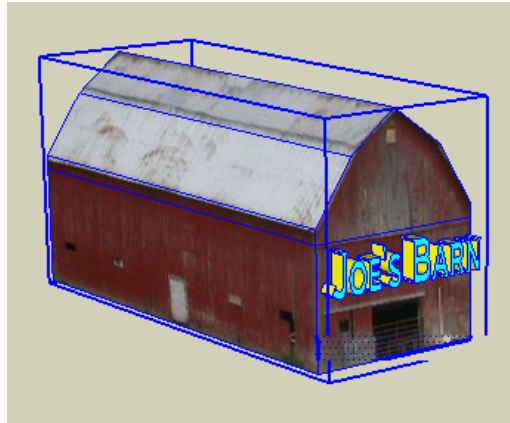
## Make a Yard and Fence

In this section, we'll make a big grassy yard for the farm, and put a fence around the yard.

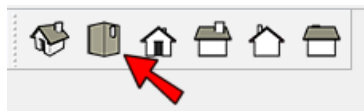
1. Before starting the yard, select the whole barn, plus the letters. You can use a selection window, or press `Cmd + A` to select everything.



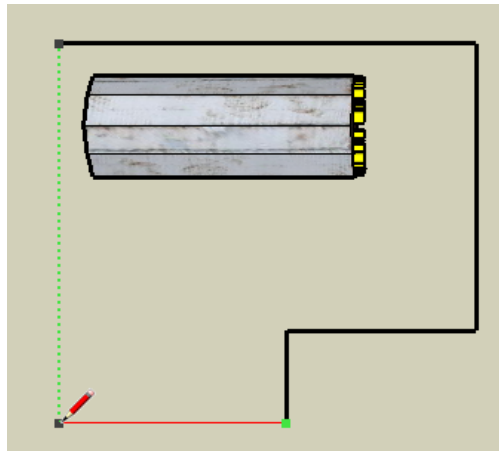
2. Make it a group (right-click and choose Make Group). This is to protect the barn from other objects sticking to it.



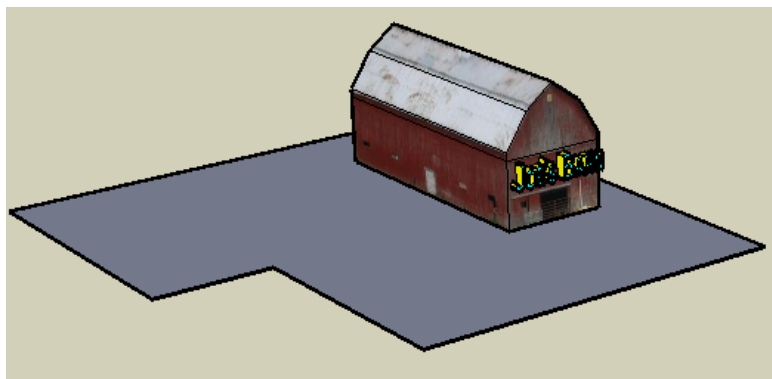
3. Now switch to Top view so we can easily make the yard.



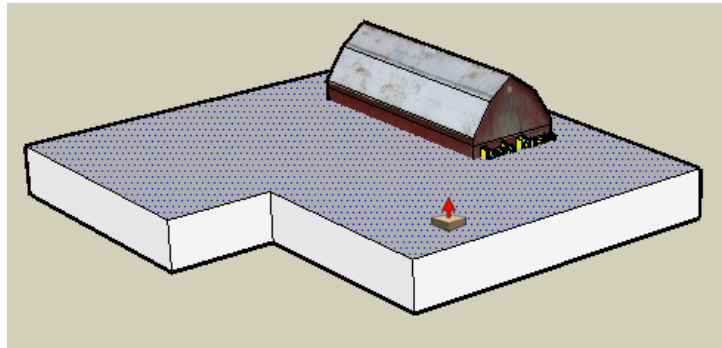
4. Use Line to make your yard. I'm using a shape like this, making sure that the last line will be perfectly vertical. You don't have to be so picky, but make sure your yard shape is closed (the last line should end where the first one started). You could just make a rectangle, but that would make a rather boring yard.



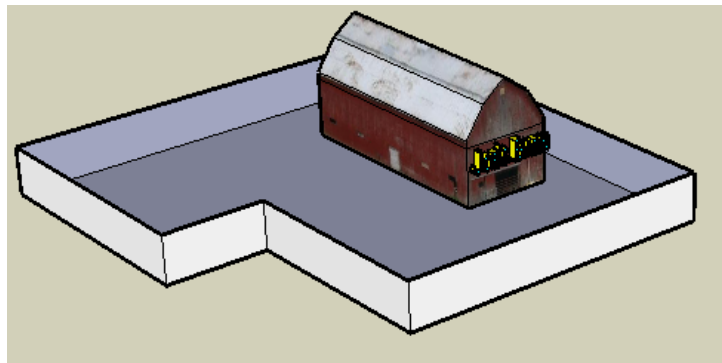
5. Orbit around to see your yard with the barn sitting on top.



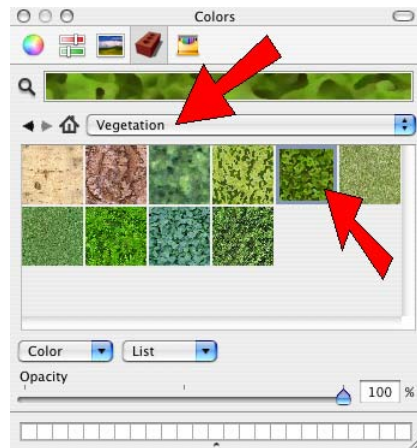
6. Push/Pull up your yard like this.



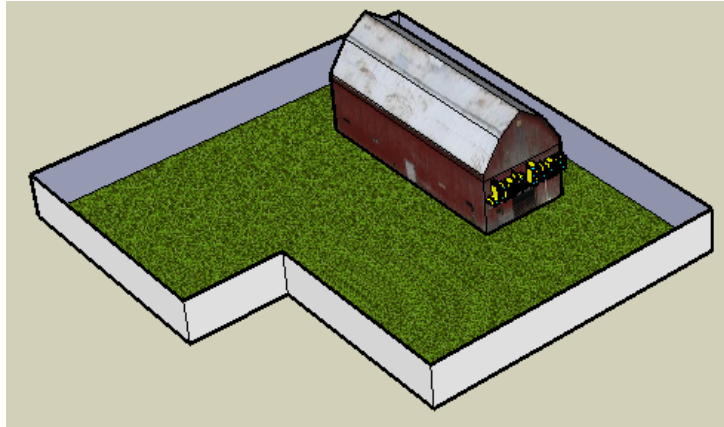
7. Erase the top face of the “yard.” No edges are stuck to the barn, because the barn is a group. And now we have vertical faces all around the yard, where can paint the fence.



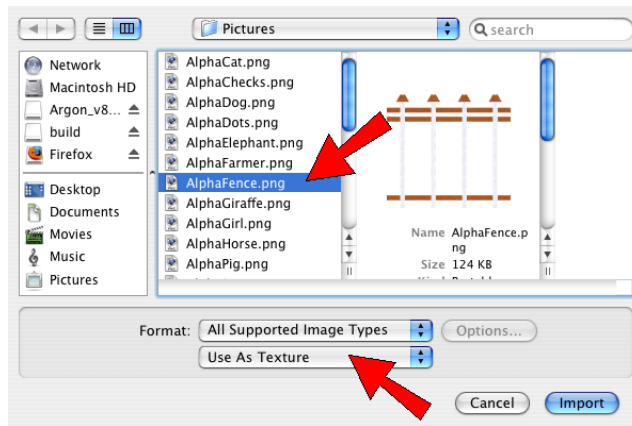
8. To paint some grass, open the “Vegetation” collection of the Colors window and pick one of the grassy materials.



9. Paint the yard with grass.



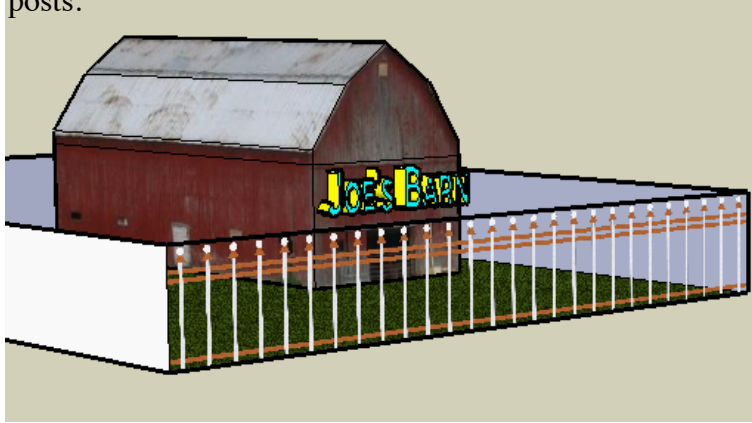
10. Now for the fence, which will be another “alpha” material. Use File / Import and find the “AlphaFence.png” material, and click Use as texture.



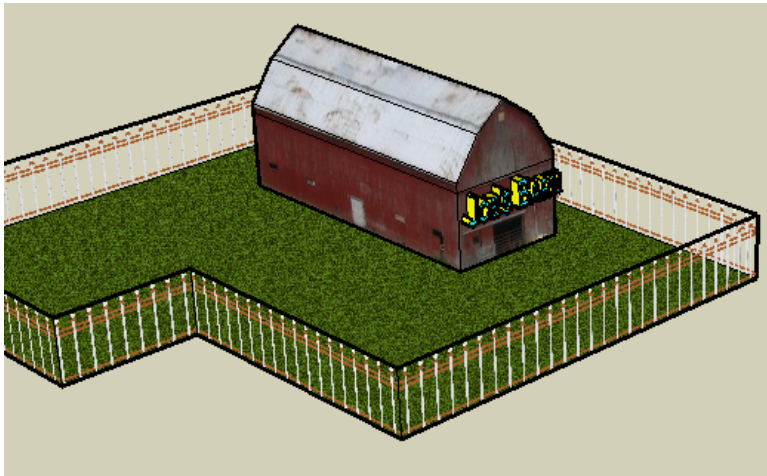
11. Click two corners on one of the fence faces, and make the fence exactly as tall as the face.



After you click the second corner, the whole face is painted. And you can see through the face, in between the fence posts.



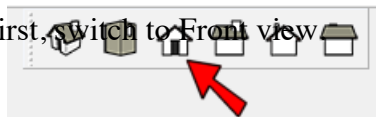
12. Use the eyedropper, or find the fence thumbnail in “Colors in Model,” to paint the rest of the fence faces.



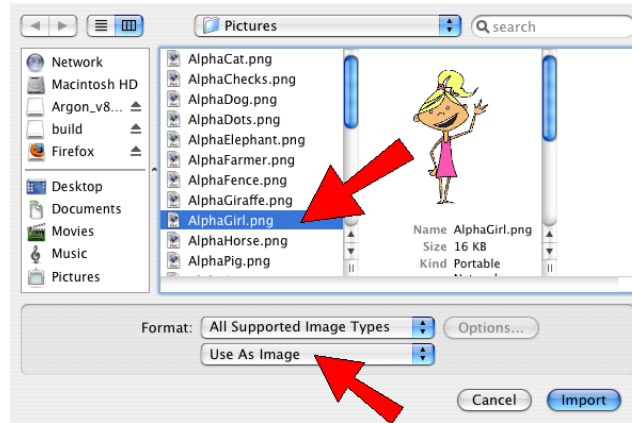
## Add People, Animals, and Trees

In the pictures you downloaded, there are a few “Alpha” pictures of people, animals, and trees, that you can use to place in the farm yard.

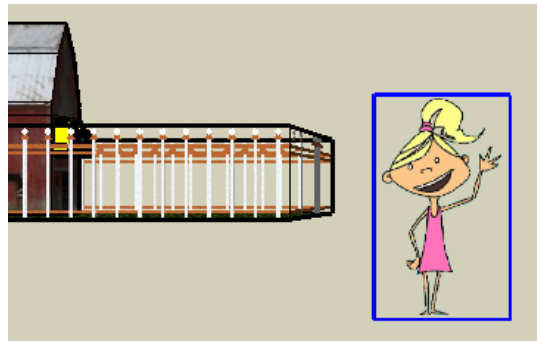
1. We'll start with a cartoon girl. First, switch to Front view.



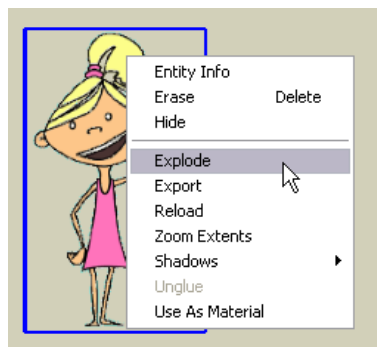
- Use File / Import and find “AlphaGirl.png.” This time make sure Use as image is checked.



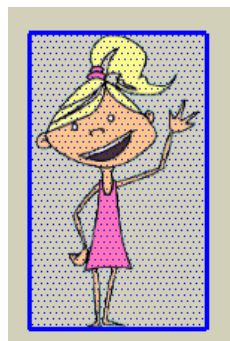
- Place the girl somewhere outside the farm yard, making her the right size. (Or you can make her a giant, if you want.)



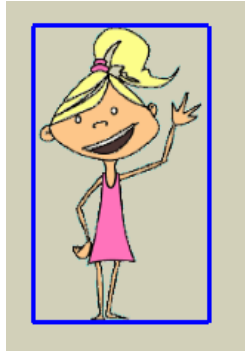
- She will be made into a component. First, right-click on her and choose Explode.



- Now the girl is a painted rectangle. We don't want to see the outside edges of the rectangle, so we'll hide them. Activate Select and double-click on the rectangle to select both the face and the edges.



6. Then press Shift and click on the face. This unselects the face, and only the edges are still selected.



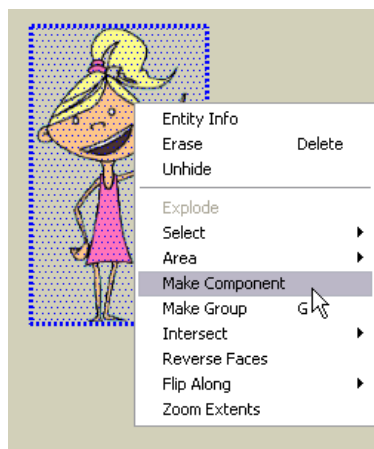
7. To hide these edges, choose Edit / Hide. (You can also right-click on an edge and choose Hide.) Now you see only the girl, no edges.



8. But she's not a component yet. Activate Select and double-click on the face again, which selects the face and the hidden edges (the edges appear as dotted lines).

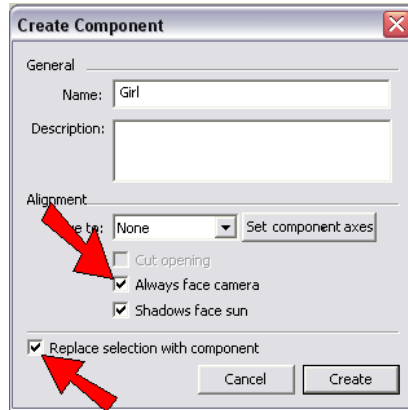


9. Now right-click on the rectangle and choose **Make Component**.





10. Name the component something like “Girl,” and make sure you check Always face camera. Also, **check Replace selection with component. Then click Create.**



Now she has a blue box around her.



11. Move her into the yard, somewhere in front of the barn. (When you move her, click on the bottom of one of her feet, and place the feet on the grass. You should see “On Face” when the foot is on the grass.)

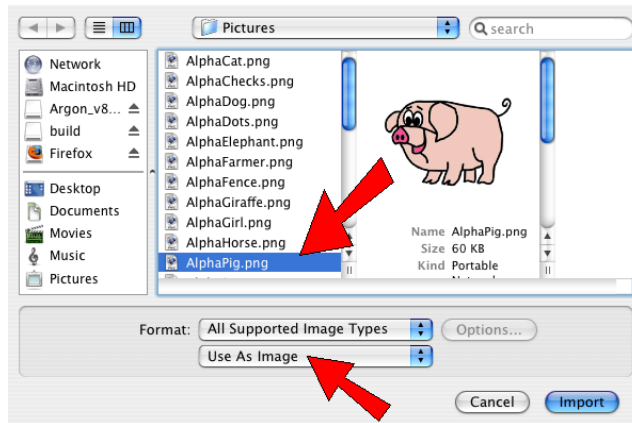


If she looks like she’s not quite the right size, select her and use Scale to make her bigger or smaller.

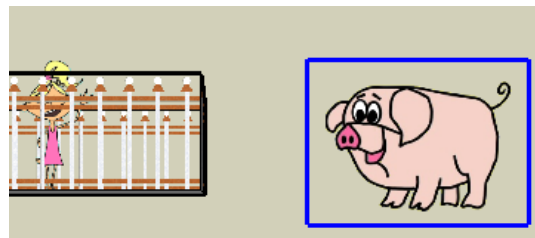
12. Orbit around, and you'll see the girl facing you wherever you are.



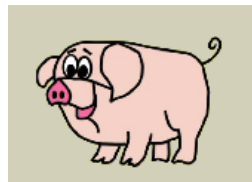
13. Now let's bring in a pig. Use File / Import and find "AlphaPig.png."



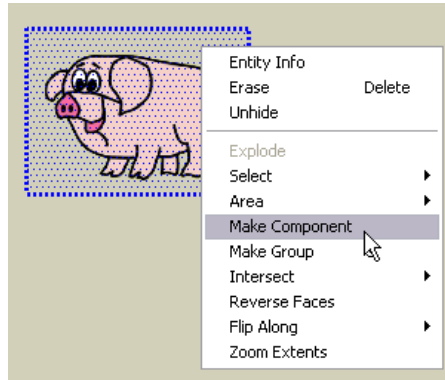
14. Go back to Front view and bring in the picture, making it the right size.



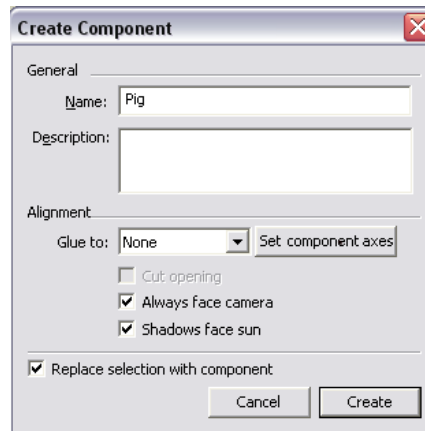
15. Explode the picture and hide its edges.



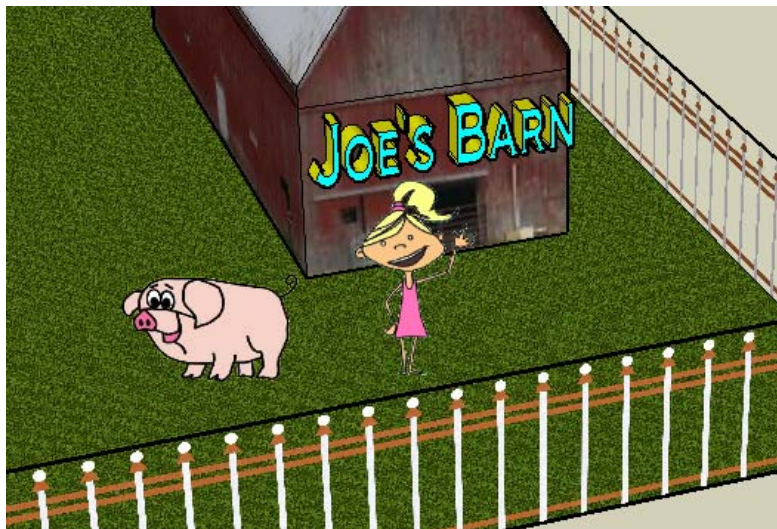
16. Select the pig rectangle and its edges, and make it a component.



17. Again, make sure always face camera is checked.



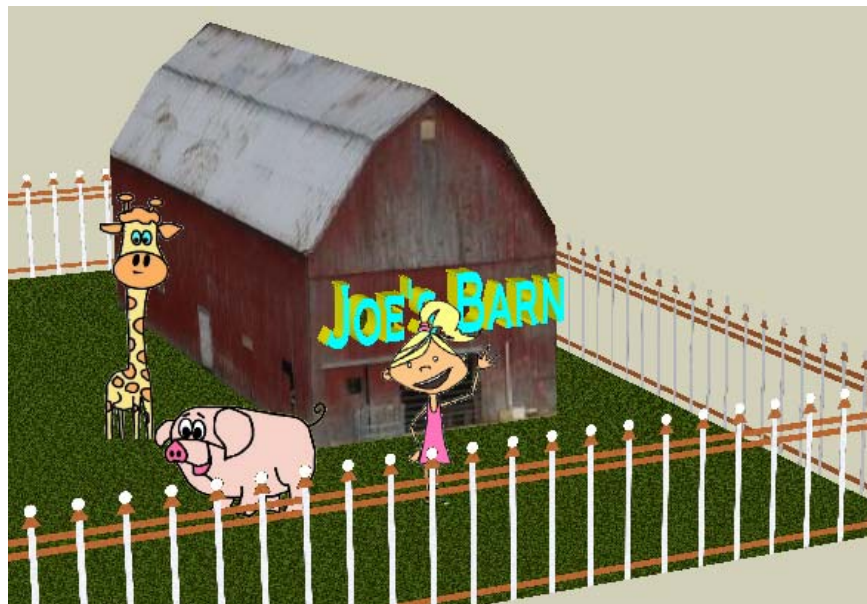
18. Move the pig into the yard. Remember, click one of his feet and place them “On Face” on the grass.



19. Do the same with “AlphaGiraffe” (unless you don’t think giraffes belong on a farm).



20. If you want your farm to look a little more realistic, use the View / Edge Style menu to hide edges and profiles.



21. There are a few more alpha animals and people you can add: a farmer, elephant, dog, horse, and cat. Add as many as you like. (I made my grass material a little lighter so that the animals in the yard can be seen better.)

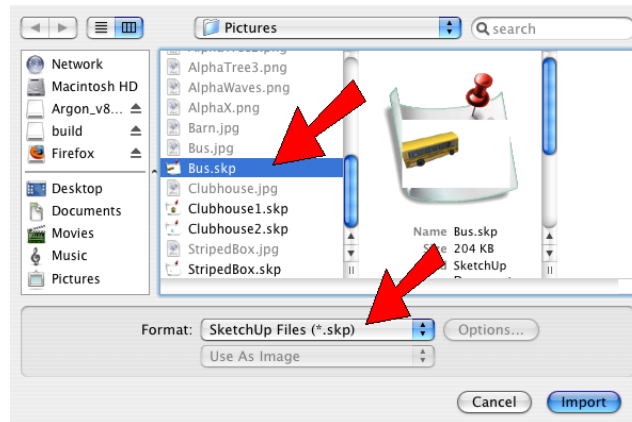


22. I also included three trees (the three “AlphaTree” pictures) in the corners of the yard.



## Add the Other Models from this Book

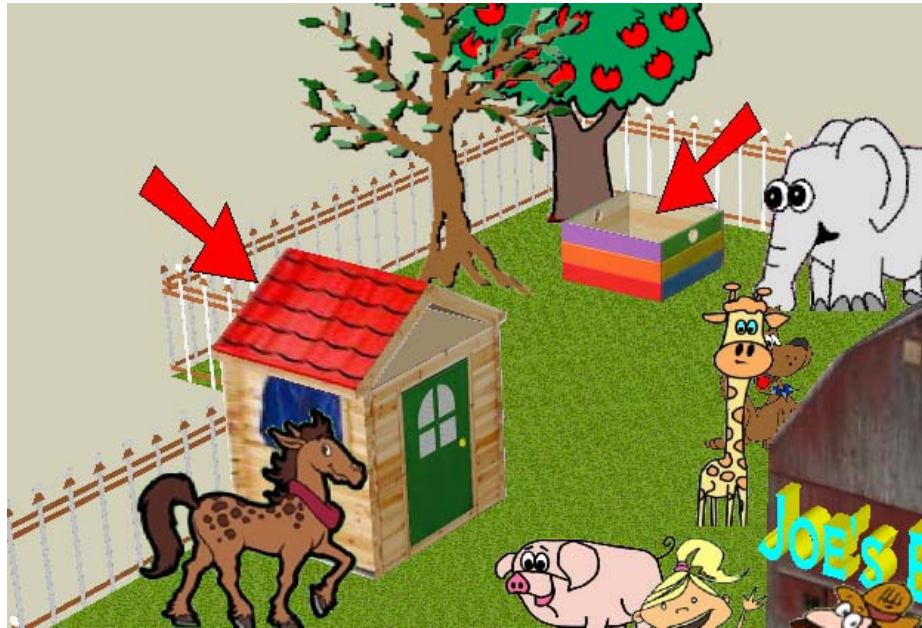
1. To make your farm to look REALLY busy, let's add the bus, clubhouse, and striped box we made earlier in the book. Use File / Import, but this time make sure that Format is set to "SketchUp Files." Find "Bus.skp" and click Open.



2. If you don't have enough space in your yard, place the bus outside the yard. If it's not the right size, use Scale to size it.



3. Do the same to bring in the clubhouse (either one) and the striped box.



Here's my entire farm: animals, barn, and all.



**RAISE YOUR HAND AND HAVE ME GRADE YOUR FARM!**

## Chapter Review

Here's what we've learned in Chapter 4:

- If you press Option while using Push/Pull, you will create a new set of faces.
- When you create text using the 3D Text tool, the text is a component. If you paint text, the whole text will be painted the same color. If you want to use different colors, you need to either Explode or Edit the text component.
- To import another SketchUp model into your model, use File / Import and set Format to SketchUp Files. Models imported this way are imported as components.



