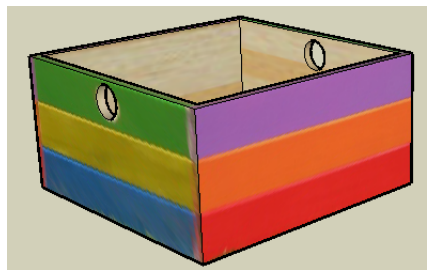


1 Striped Box

In this chapter, we'll start with this picture:



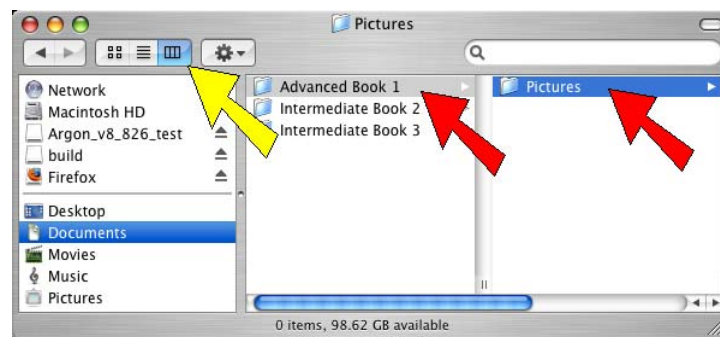
We'll make a SketchUp model of a box, with the picture shown above painted on the outside faces:



Download the Pictures for the Book

Before we start painting, we need to download the pictures that will be used in the book. If you've read the books in the ModelMetrics Intermediate Series, you already know how to find and download these pictures. But I'll list the instructions again, just in case.

1. The first step is to make a folder on your computer where you want to store the pictures. I made a folder inside "Documents" called "Advanced Book 1" And inside that folder, I made another folder called "Pictures." You can place your folder wherever you want, with any name you want. Just remember where it is!

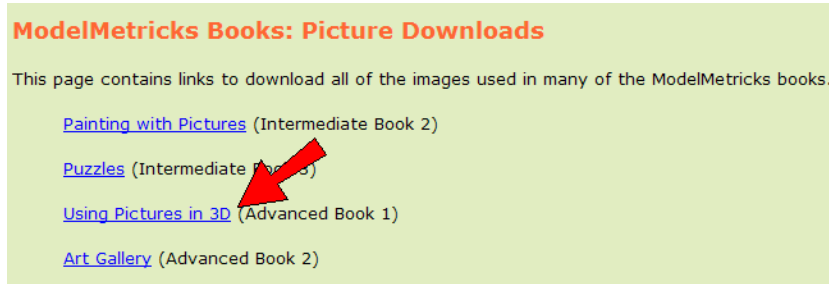


If you don't know how to make a folder, just open a folder you already have, such as "Documents." Right-click in some blank space and choose New Folder. As soon as the new folder is created, you can change its name. If you want to see your files the way they're displayed in the picture above, click the icon above that has the yellow arrow.

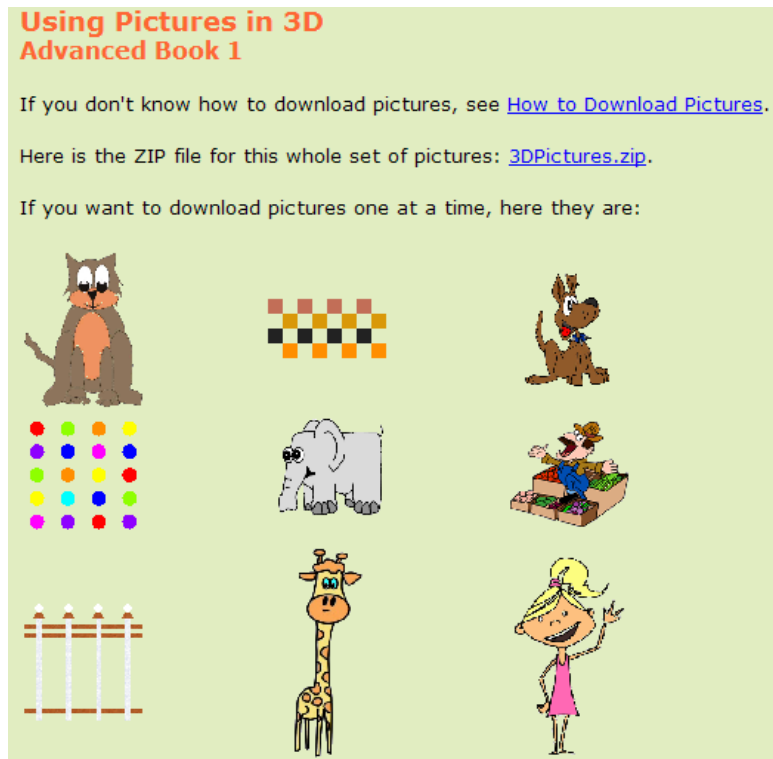
2. Open your web browser and go to this site: www.3dvinci.net/pictures



3. There are links at the top of this page for each book that uses downloaded pictures. Click the link for this book, “Using Pictures in 3D.”

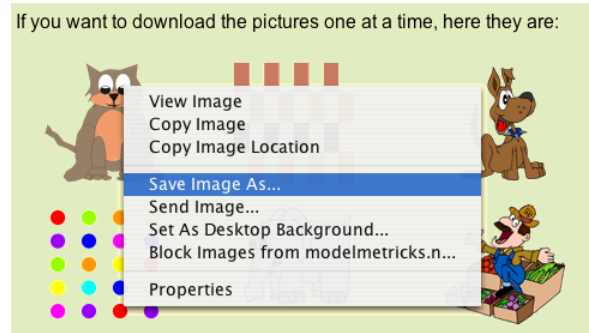


Here is what you’ll see for this book. There are instructions for two ways to download these pictures: either downloading one at a time, or downloading all the files at once, in a ZIP file. Below the instructions are thumbnails (small copies) of each picture.

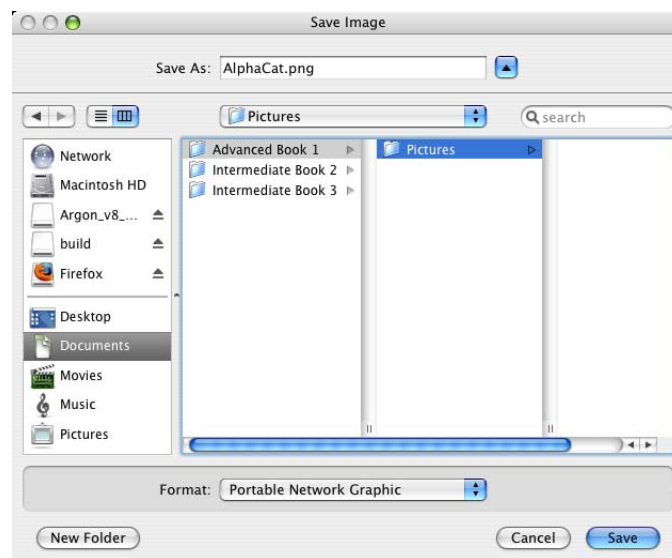


On the Mac, it’s pretty easy to just download the ZIP file. It will be saved as a folder in your “Downloads” folder. You can open this folder and move all the pictures inside to the folder you made for the pictures.

- If you don't want to use the ZIP file, and want to download pictures one at a time instead, right-click on the first one and choose **Save Image As**.



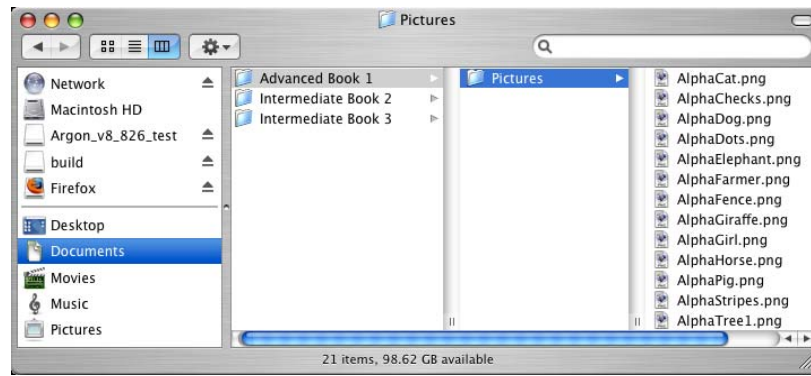
- Browse to the folder you set up to store these pictures (my folder is called "Pictures"). The picture already has a file name and file type (this one is called "AlphaCat.png"), so don't change it. Then click **Save**.



- Repeat this download step for all of the pictures in the book group. There are 21 pictures total.

Most of the pictures you'll download here start with "Alpha" and have the extension PNG. "Alpha" is a graphic term that means that part of the picture is transparent. The alpha pictures on my website have transparent backgrounds, and you'll use these in the last two chapters. PNG (sometimes called "ping") is a type of graphic file that allows transparency. The other pictures are JPG's, which is the graphic type usually used for Internet pictures.

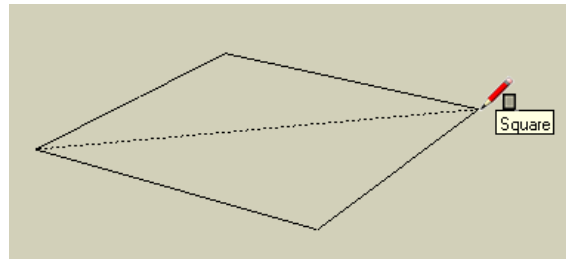
7. Open the folder where you saved your pictures, and they should all be there.



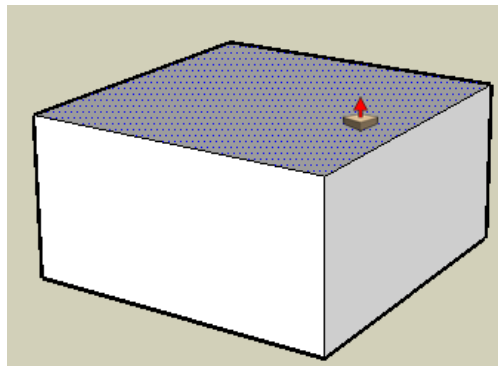
Now we're ready to build a model and paint it.

Paint the First Face

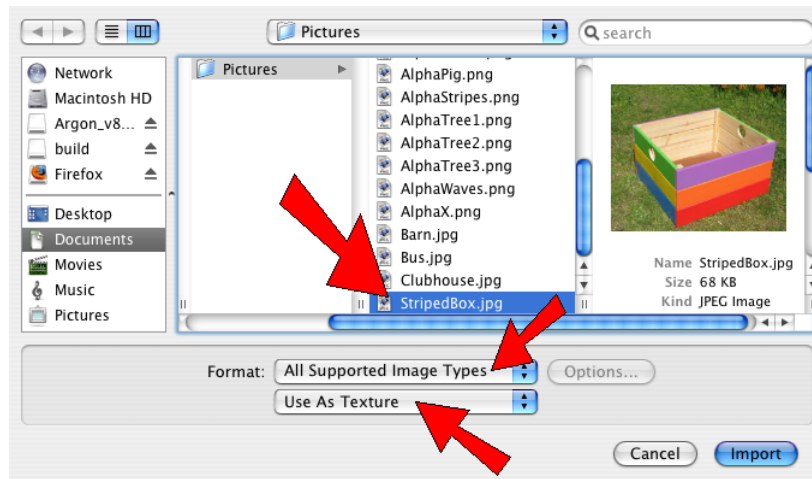
1. Start a new SketchUp file and erase the person in the file.
2. Activate Rectangle and draw a square lying flat on the ground.



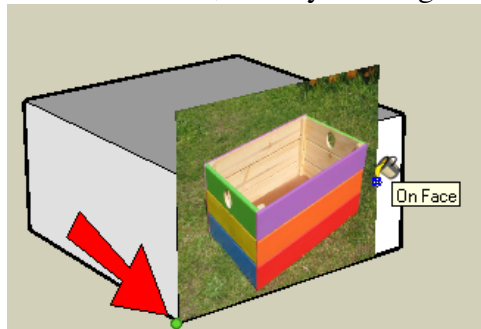
3. Push/Pull up to make a box like this.



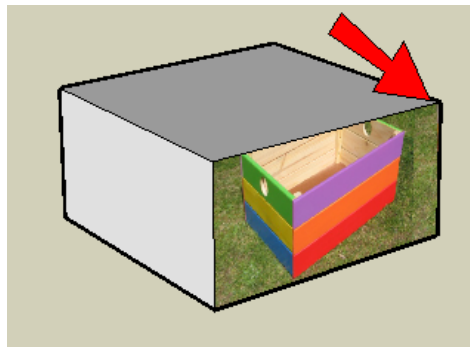
- From the main menu, choose File / Import. At the bottom of the window, Format should be set to All Supported Image Types. The option below that should be set to Use as Texture. Find the picture you downloaded called “StripedBox.jpg.” Then click Import.



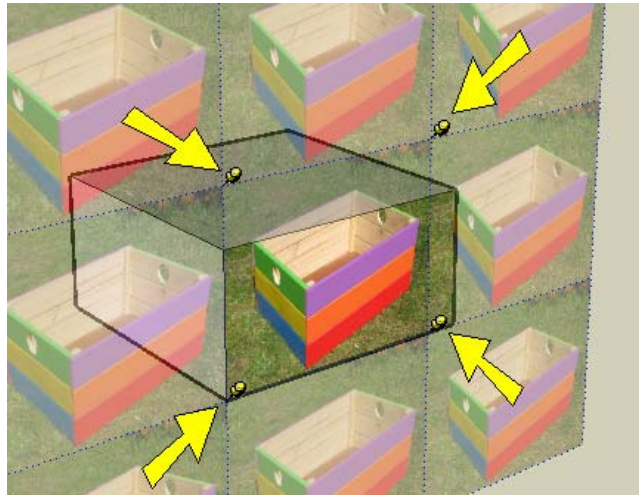
- To paint this picture onto one side of the box, start by clicking the bottom left corner.



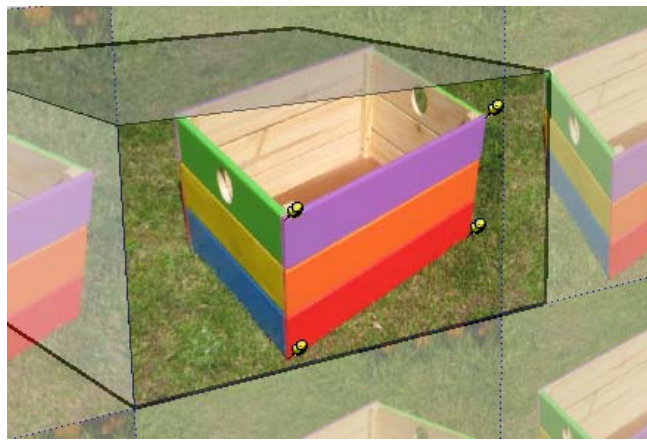
- Then click the top right corner. The side of the box will look something like this:



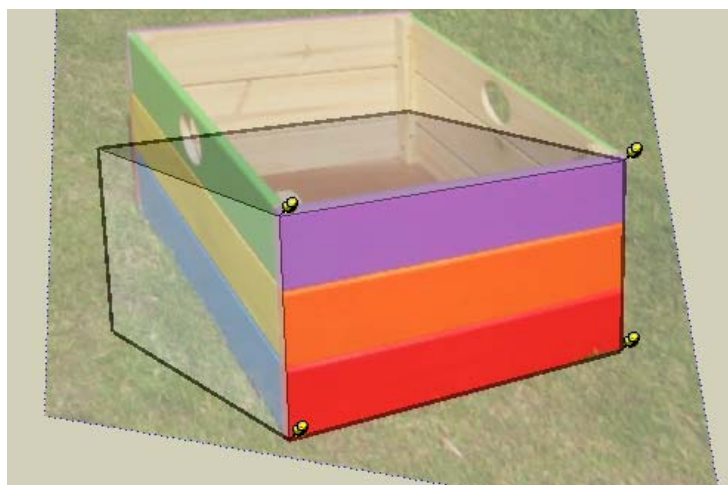
7. Right-click on the painted face and choose Texture / Position. We want to work with free pins, which are four identical yellow pins. If you have four pins with four different colors, right-click and choose Fixed Pins to switch the pins.



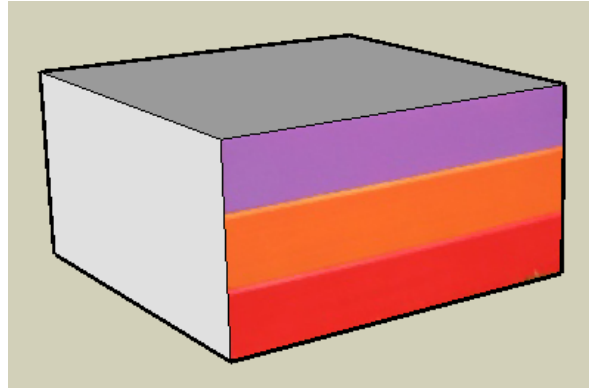
8. To move a pin, click it once to “lift” it off the picture, and click again where you want to place it. Move each pin to a corner of the purple, orange, and red side of the box in the picture. Each pin should be on a front corner of this face. It helps to zoom in to place pins exactly.



9. Drag each pin to a corner of the side of the SketchUp box.



10. Right-click on the face and choose Done. Your box side should look like this.

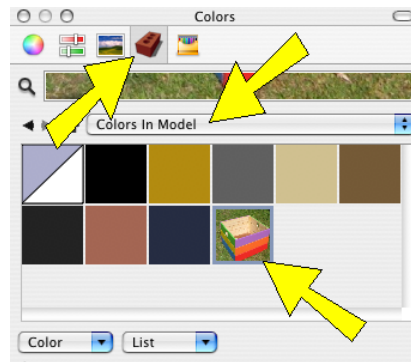


If your stripes don't look quite right, go back into texture positioning and tweak the pins. Sometimes you have to do this a few times to get it exactly perfect.

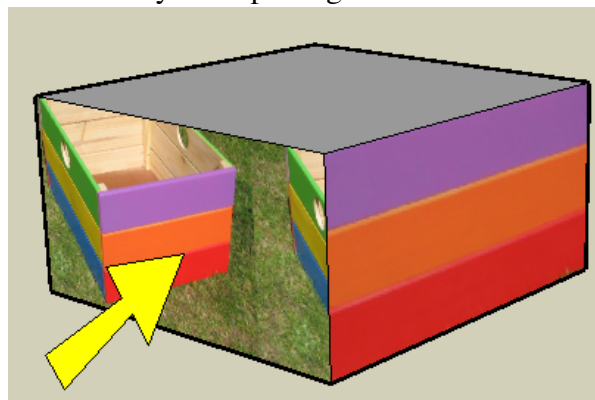
Paint the Other Faces

When you paint the rest of the faces, you don't have to do quite as much work as when you painted the first face.

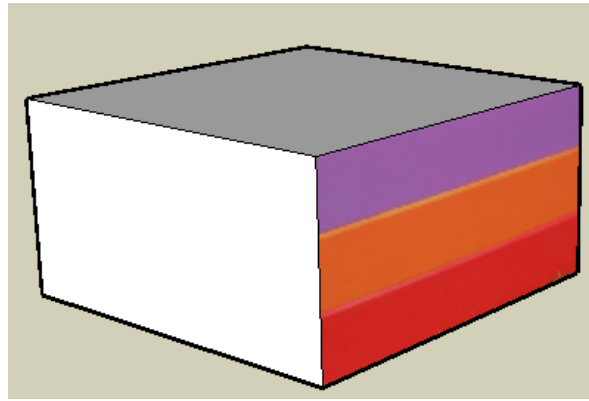
1. First, we'll see how not to paint the next face. Open the Colors window, and make sure the brick icon is clicked at the top. Open the "Colors in Model" collection, and click the thumbnail of the box picture to activate it.



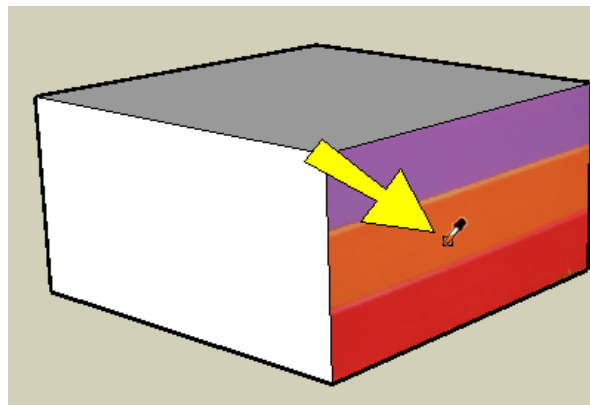
2. Click this side of the box. The size of the picture is the same as when you first clicked the first face, and you'd have to position all four yellow pins again to fix it.



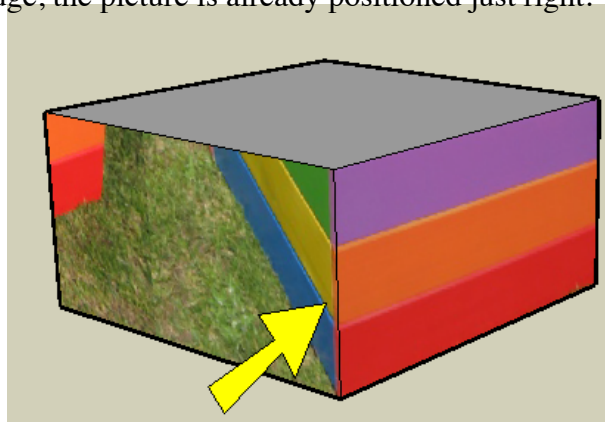
- Undo (Cmd + Z) to remove the picture from the side of the box.



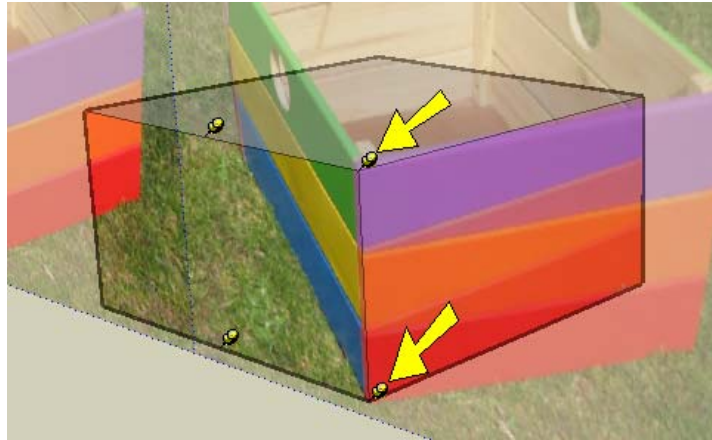
- Here's a better way. The Paint Bucket tool should still be active, so press and hold the Cmd key. The cursor should be an eyedropper symbol. Click the eyedropper on the side you painted first. (This is called "sampling" the paint.)



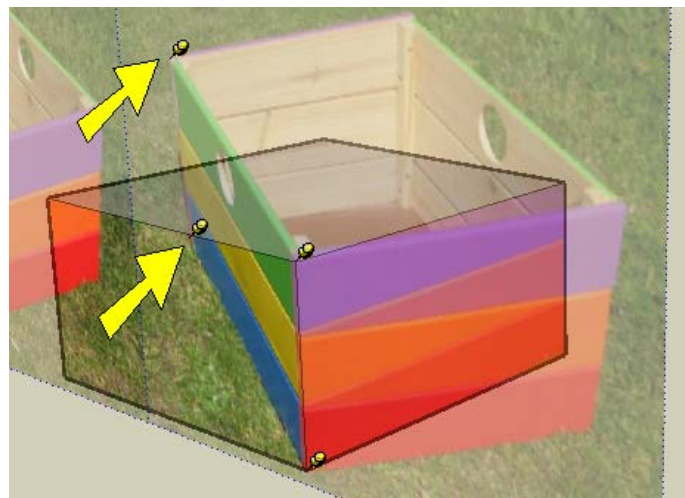
- Then click the face you painted before and then undid. The picture is now the right size, even though it doesn't line up correctly. But look at the edge between the two faces (where the yellow arrow is pointing). Along that edge, the picture is already positioned just right.



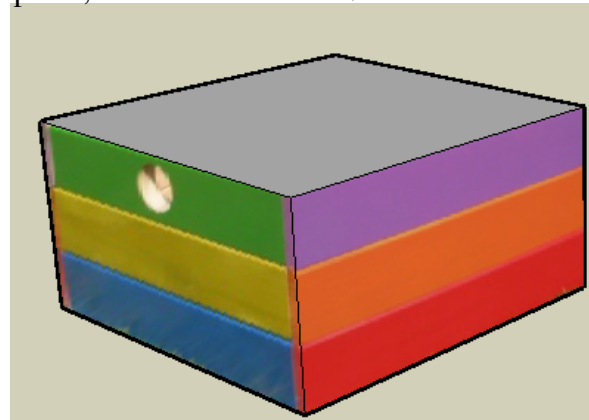
- 6. Start texture positioning on this face. Two of the pins, the ones along the common edge, are already in the right place.



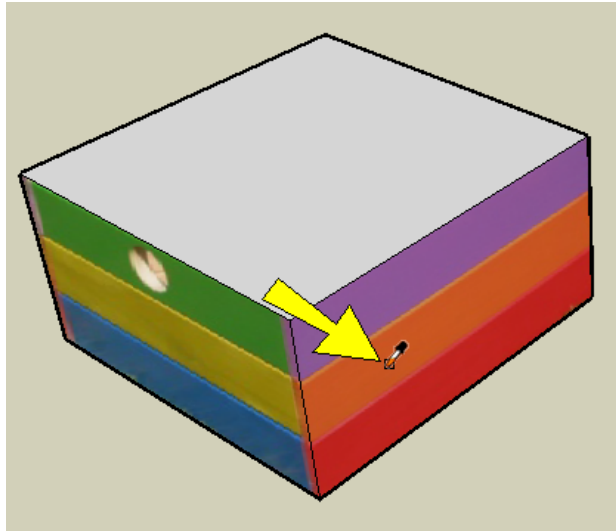
- 7. The only pins you need to move are these two, so move them into the correct corners:



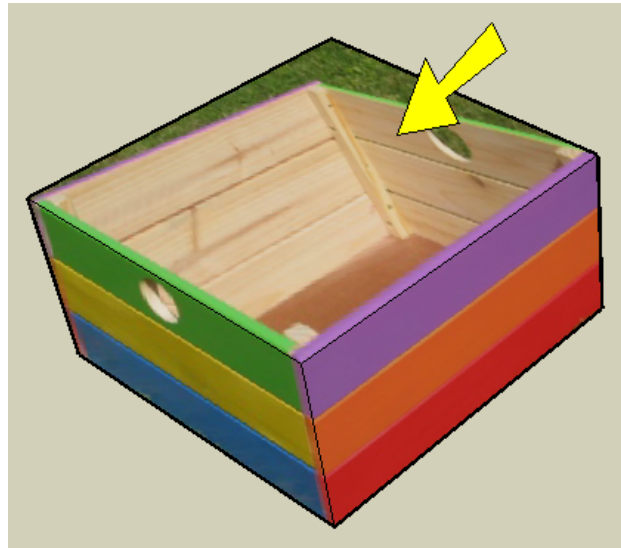
- 8. Drag those two pins into place, and choose Done. Now both sides have the correct paint.



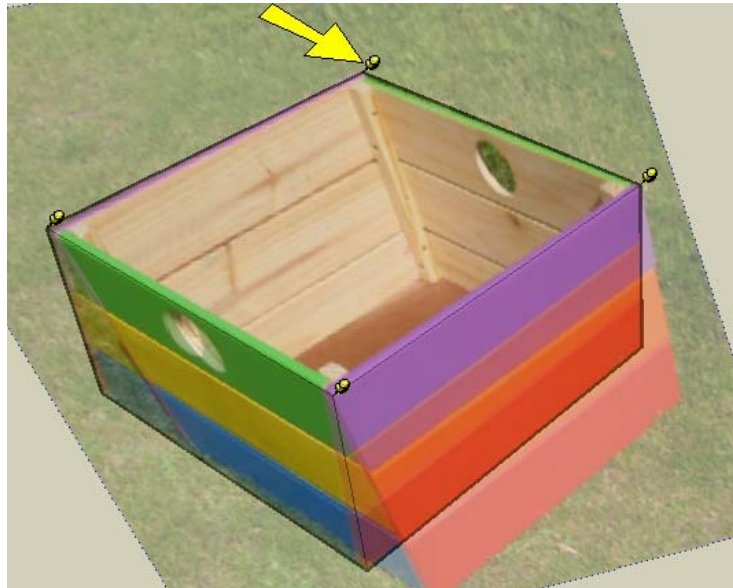
9. Now for the top of the box. Use the eyedropper again, and click on either of the painted faces.



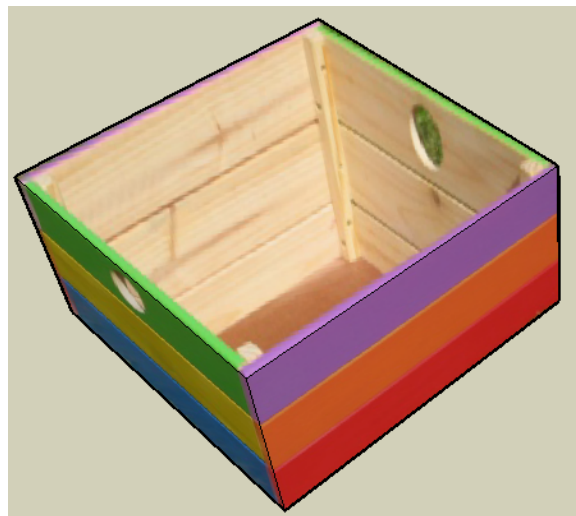
10. Click the top face. Along the two edges where the top meets the painted sides, the picture lines up correctly.



11. In texture positioning for the top face, this is the only pin you need to move and drag:



12. Choose Done, and the box should have three perfectly painted faces. But the box is still solid - it should be hollow like a real box.

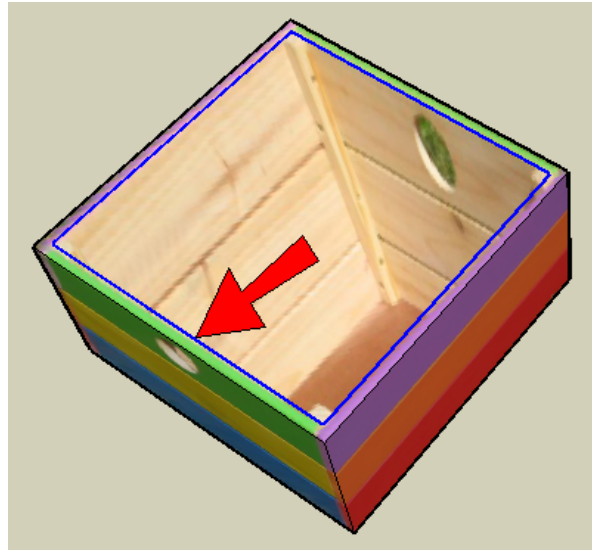


Fix the Model to Match the Picture

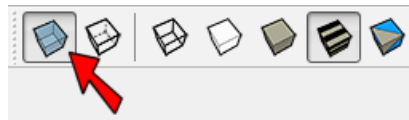
1. The box in the picture is open at the top, so we need to make our SketchUp box match it. Activate **Offset**.



2. Click on the top face, then move the mouse and click again, to make a square that meets the purple and green edges of the paint.

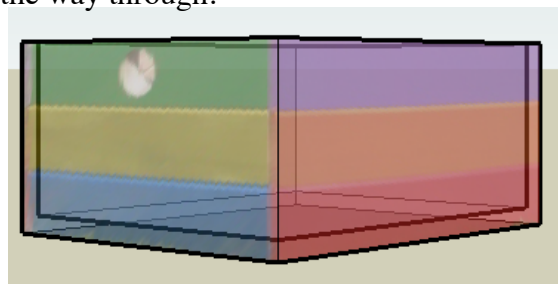


3. We want to push this middle part down, but it'll be hard to see where to stop. So first, click the X-Ray icon.

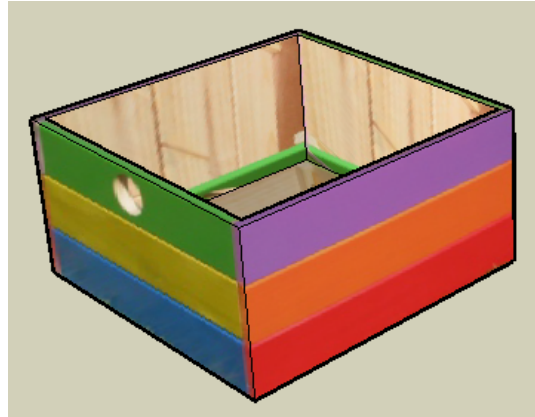


If you don't see this toolbar, go to the main menu and choose View / Customize Toolbars. From the large menu that appears, drag the Styles toolbar onto the main toolbar.

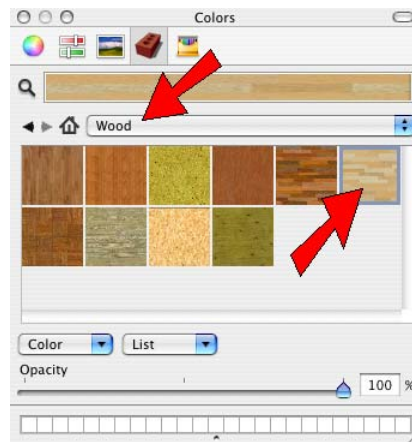
4. Now use Push/Pull on that top offset face, to make the box shape. Because you can see through the sides, you won't push all the way through.



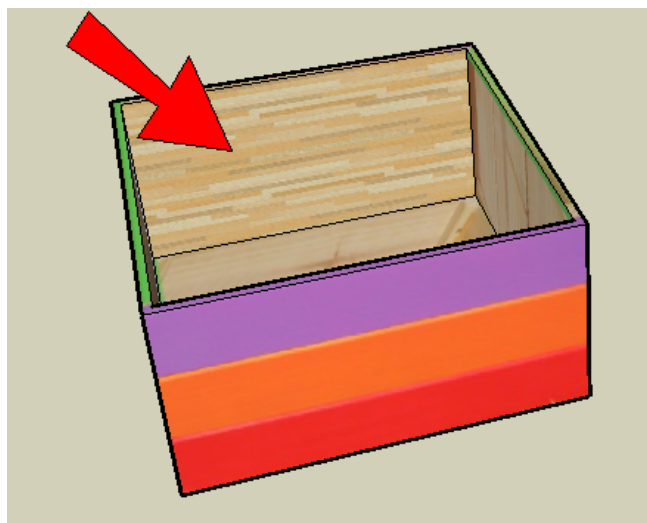
- Click X-Ray again to bring the model back to normal. The inside faces of your box might look different than this, but we'll paint over them anyway.



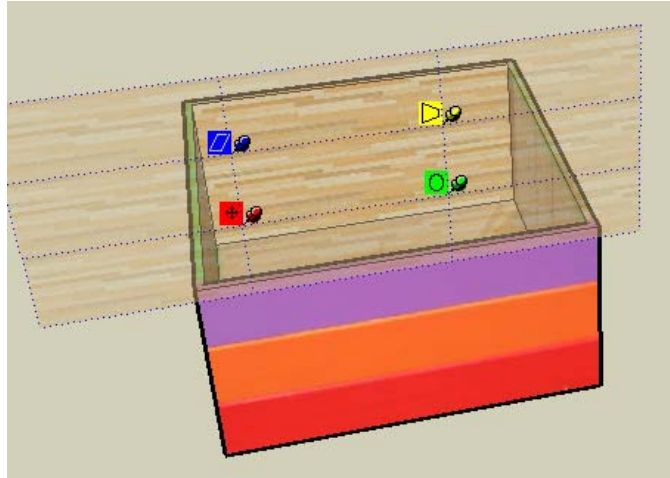
- For the inside faces, you could position the pictures so that each face would have some of the unpainted wood. But that takes a lot of time, and it's just as easy to use a material you already have. I'm using "Wood_floor_light" in the "Wood" collection.



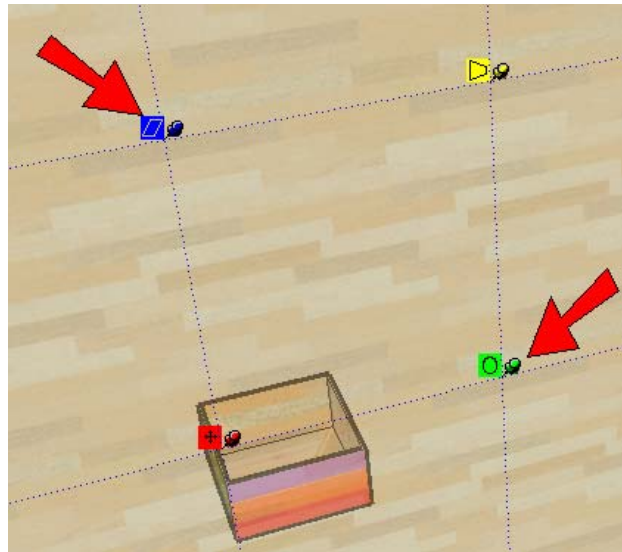
- Click one of the inside faces to paint it with wood.



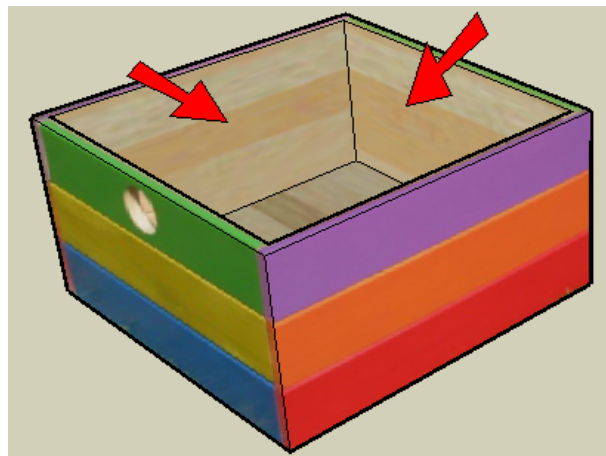
8. Start texture positioning. You'll see four yellow pins, but now we want fixed pins instead. So right-click and choose Fixed Pins. You should now have four pins with four different colors.



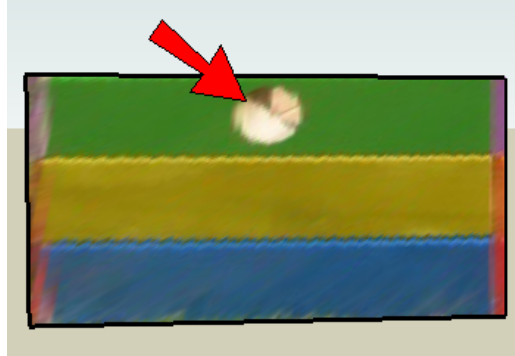
9. To make this texture larger or smaller, you can drag the green pin to the right. To make it taller or shorter, you can drag the blue pin. If you want to match the original picture, your wood texture should be made large enough so that three slats of wood are showing.



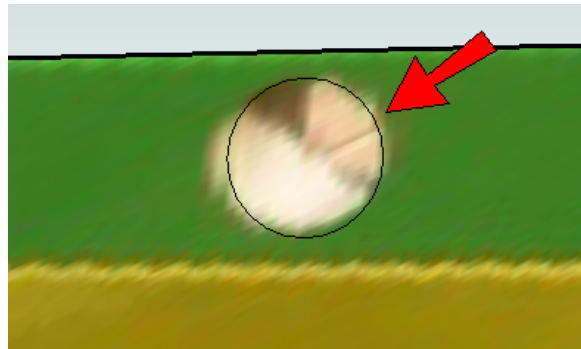
10. Then use the eyedropper to sample the "correct" wood texture and paint all of the other inside faces, including the bottom.



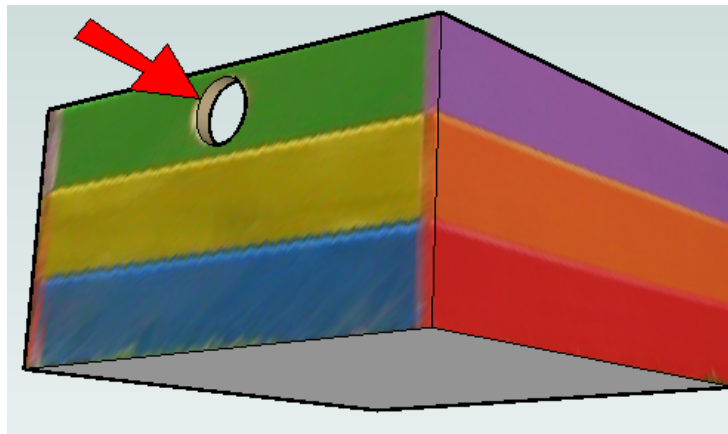
11. On the side with the green, yellow and blue stripes, there is a round hole in the picture. Orbit so you are facing the hole head-on.



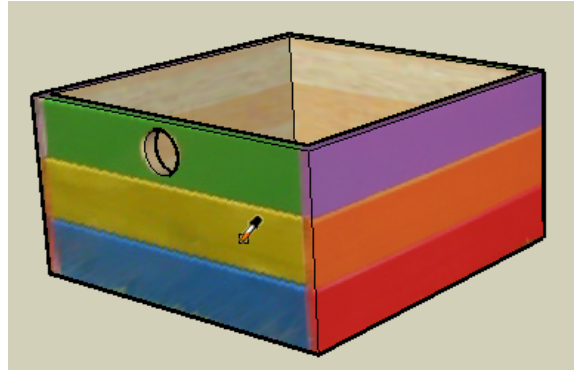
12. Draw a circle right on the picture, to match the hole. (Don't worry if your painted hole isn't a perfect circle, or if the edges don't match perfectly.)



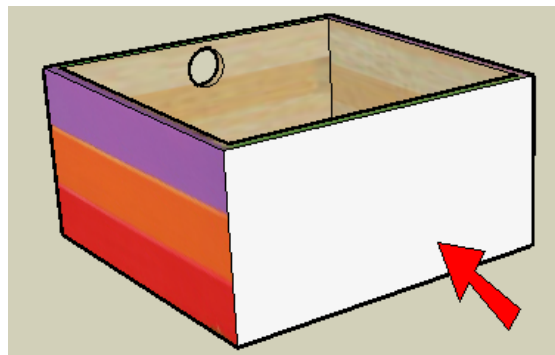
13. Push/Pull the hole through. You can use a solid color, or light wood, to paint the small face inside the hole.



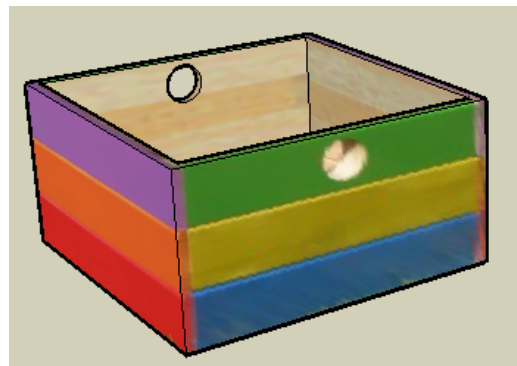
14. There are still two sides of the box that aren't painted yet. Use the eyedropper to sample the green, yellow, and blue face.



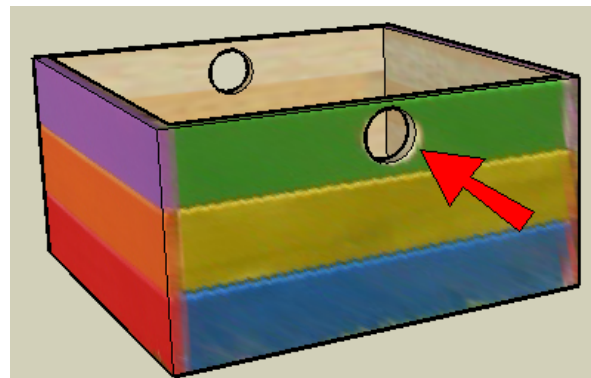
15. Orbit to see the face that should have the same green, yellow, and blue paint.



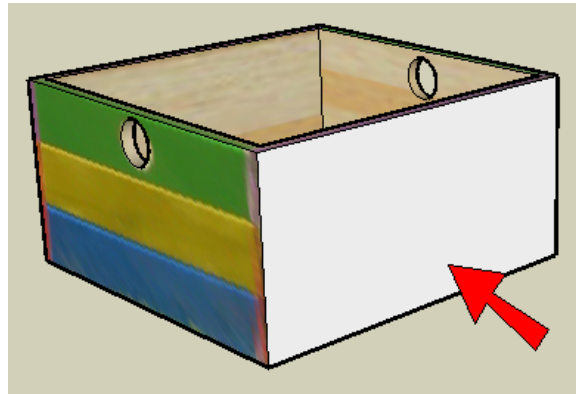
16. Click this face to paint it.



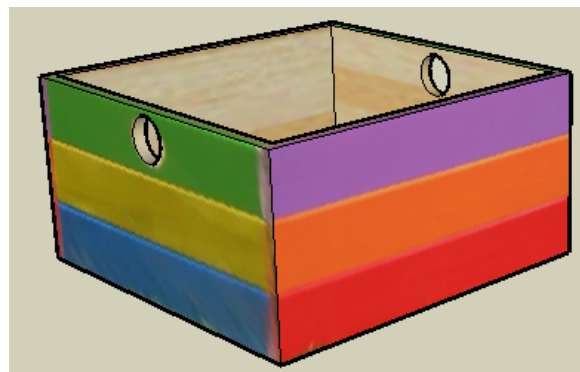
17. Make the same hole on this face.



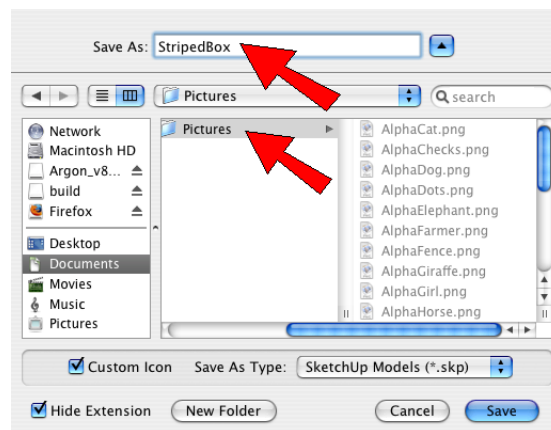
18. To finish up, use the eyedropper to sample the purple, orange and red face, and orbit around to the last unpainted side.



19. Paint this face, and we're all done!



20. We need to save this file, since you'll use it again at the end of the last chapter. Choose File / Save As from the main menu. Save it in the same folder where you downloaded the pictures. I'm naming my model "StripedBox."



Chapter Review

Here's what we've learned in Chapter 1:

- To download a picture from the Internet, right-click on it and choose Save Picture As, or the saving option offered by your browser.
- To paint with a picture, choose File / Import from the main menu. Make sure you're using Format set to **All Supported Image Types**. Also, choose **Use As Texture**.
- To **"fix"** a picture so that it fits into a face, right-click on the face and choose **Texture / Position**.
- Free pins are four yellow pins. These pins are used to fit a picture to a face. Click each pin and move it to a corner of the picture, then drag each corner into place.
- Fixed pins each have a different color, and are used to make a texture larger, smaller, taller, shorter.
- You can switch between fixed pins and free pins by right-clicking on the face you're working on, and **choosing Fixed Pins**.
- To copy paint or a texture from one face to another, use the eyedropper: press the Cmd key while the Paint Bucket tool is active.
- If you already painted one face, and want to paint a face next to it, use the eyedropper to sample (copy) the "correct" paint. Then when you position the new texture, you won't have to position anything along the edge between the two faces.

