

Chess Pieces in Google SketchUp



If you've ever wondered how to make round objects in SketchUp, this project will show you how it's done, using the very fun **Follow Me** tool. You'll create a chess pawn based on a photo - it's easier than it looks!

Even if you don't play chess, you'll still enjoy this project. You can use the technique to make any round object: a cup, vase, bowl, streetlight, or even pieces for a different board game.

For this project, it helps to have some basic knowledge of Google SketchUp (though detailed instructions are provided). In particular, it's important to know how to zoom, orbit, and pan the view. If you need more information on how to get started, and a description of some basic tools, please read 3DVinci's Getting Started Guide (PDF).

PC users: go to http://www.3dvinci.net/SketchUp_Intro_PC.pdf.

Mac users: go to http://www.3dvinci.net/SketchUp_Intro_MAC.pdf.

Step 1: Trace the Shape

1. You'll need a photo of chess pieces, which is easy to find on the internet. I went to <http://www.chesssets.com>, clicked the link for "Chess Pieces," and the set shown below was the first one on the list.



The screenshot shows the ChessSets.com website. The header includes the logo, navigation tabs for Chess Sets, Chess Pieces, Chess Boards, Chess Tables, and Chess Accessories, and a search bar. The main content area displays the product 'Tournament Walnut Staunton Chess Pieces' with a list price of \$119.99 and a current price of \$89.99. A 'BEST PRICE GUARANTEE' badge is visible. Below the product name is a row of six chess pieces: King, Queen, Bishop, Knight, Rook, and Pawn. A list of features and a 'View More Information' link are also present.

ChessSets.com
1 of 200+ HAYNEEDLE STORES

Find it. QUESTIONS? CALL

CHESS SETS | CHESS PIECES | CHESS BOARDS | CHESS TABLES | CHESS ACCESSORIES

ChessSets.com > Chess Pieces > Staunton Pieces

Tournament Walnut Staunton Chess Pieces
Item# CB002
List Price: \$119.99
Our Price: \$89.99
Save: \$30.00 (25%)

BEST PRICE GUARANTEE
SHOP WITH CONFIDENCE

CALL NOW!
1-866-508-7131

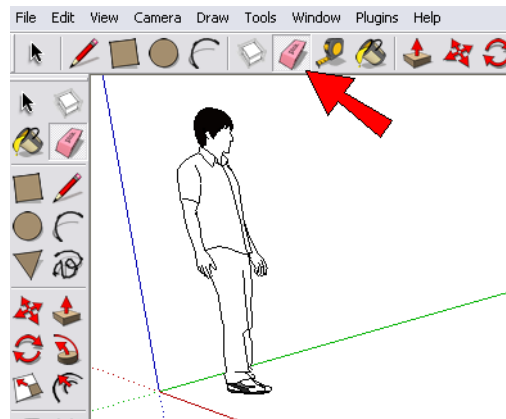
- Traditional style with sleek, classic silhouettes
- Hand-carved walnut with a natural finish
- King height: 3.75 inches
- Base width: 1.375 inches
- Felt bottoms for stability and scratch-free play
- Complete Set of Walnut and Maple playing pieces

[View More Information >](#)

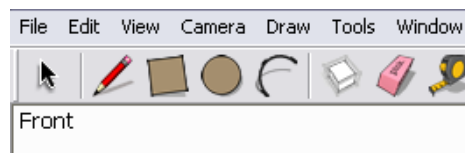
Here is the enlarged image of just the pawn. To save a picture from the internet, right-click on it and choose one of the save options. (This particular website doesn't let you save images this way, so I took a screen capture instead. If you don't have screen capture software, you can also search Google Images for pictures that can easily be saved.)



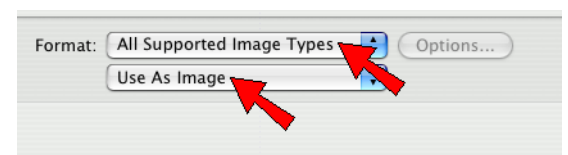
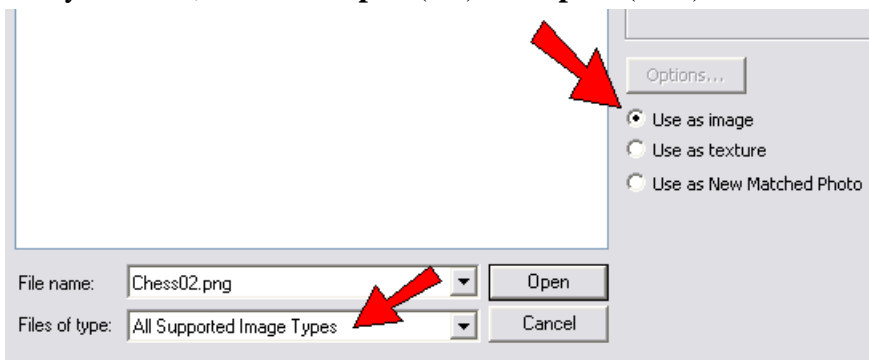
2. Open Google SketchUp. If your file contains a person standing on the ground near the origin, click the **Eraser** tool and erase him.



3. Switch to **Front** view (from the main menu, choose **Camera / Standard Views / Front**). You should see the word "Front" at the top left corner.



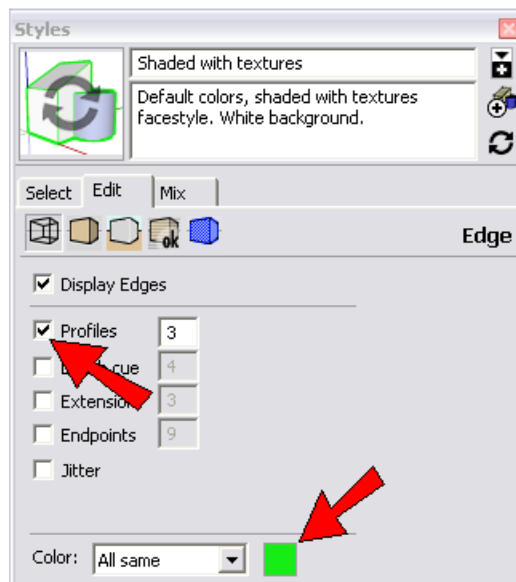
4. To bring in the picture of the pawn, go to the main menu and choose **File / Import**. Make sure you're looking for graphic files (as opposed to SketchUp files), and choose the **Use as Image** option. Browse to the picture you saved, and click **Open** (PC) or **Import** (Mac).



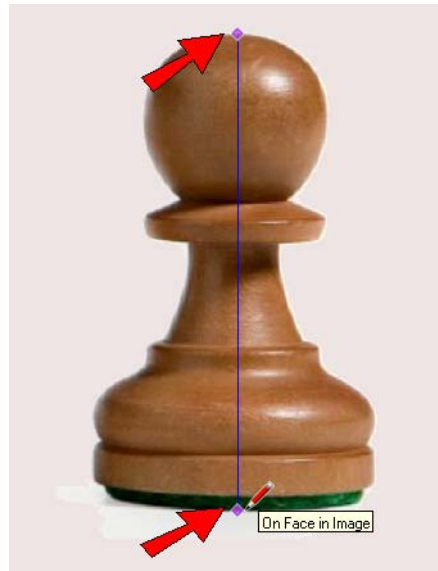
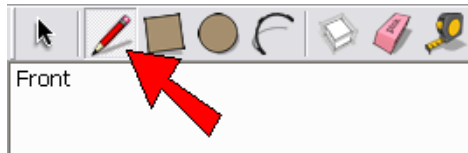
- Click anywhere to place one corner of the picture, then click to place the second corner.



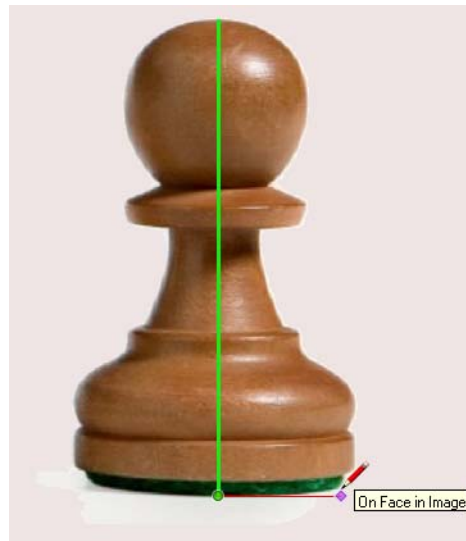
- The default color of edges is black, which may be hard to see while tracing directly on the picture. If you want to change the color of your edges, open the **Styles** window (**Window / Styles** from the main menu). Click the **Edit** tab, then the first icon in the row at the top of the **Edit** tab, which opens the **Edge** settings. Check **Profiles** so that you'll see thick edges, and click the color box to change the color to something easy to see, like green. (Mac users: after you change the edge color, close the **Colors** window.)



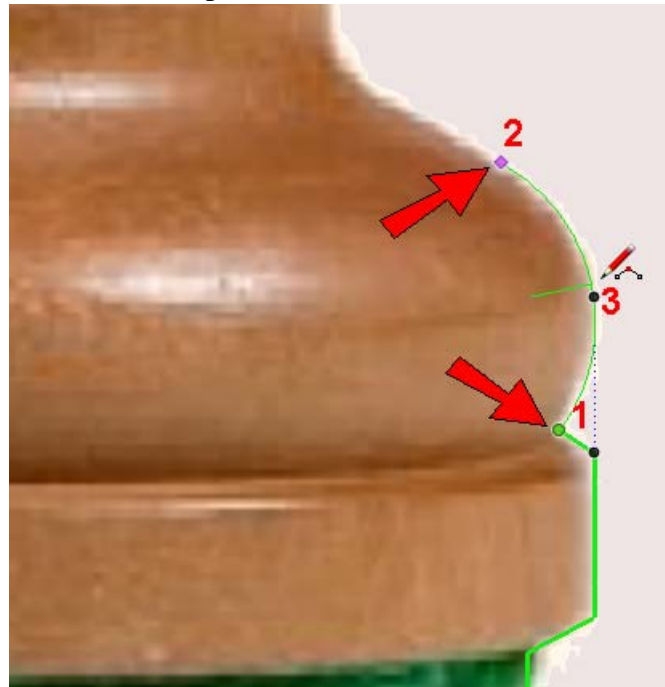
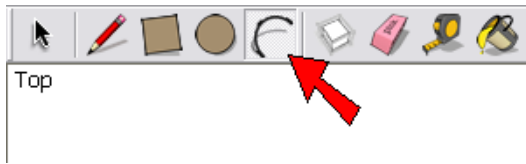
7. Activate the **Line** tool. We only need to trace around half of the pawn, so start by drawing a vertical line that divides the shape exactly in half. I started at the top and ended at the bottom. When you click points, make sure you see the “On Face in Image” popup.



When that first line is complete, it will appear in the color you set in the **Styles** window.



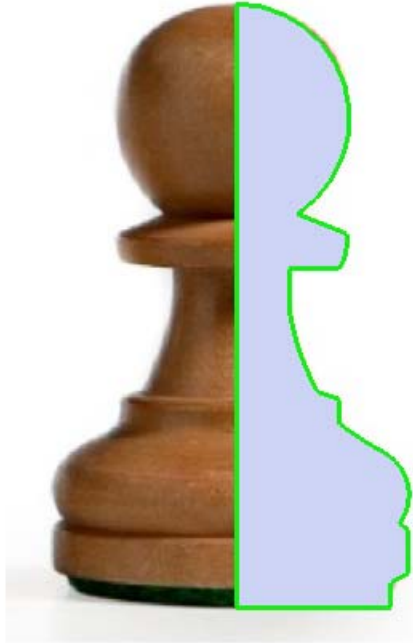
8. Continue tracing lines on one side, wherever you see straight lines. When you get to a curvy edge, activate the **Arc** tool. Start the arc at the end of the last line you drew (Point 1 below), click the second point where the arc ends (Point 2), then click Point 3 when the arc matches the picture.



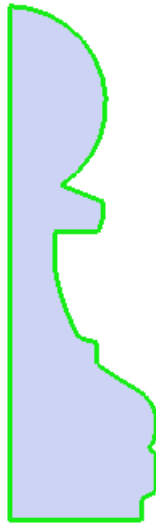
9. When you want to draw an arc that connects smoothly to the arc you just finished, the new arc should be *tangent* to the previous one. To make a tangent arc, click the arc's start point and make sure the arc preview color is light blue and the "Tangent" popup appears. Then *double-click* the arc's end point.



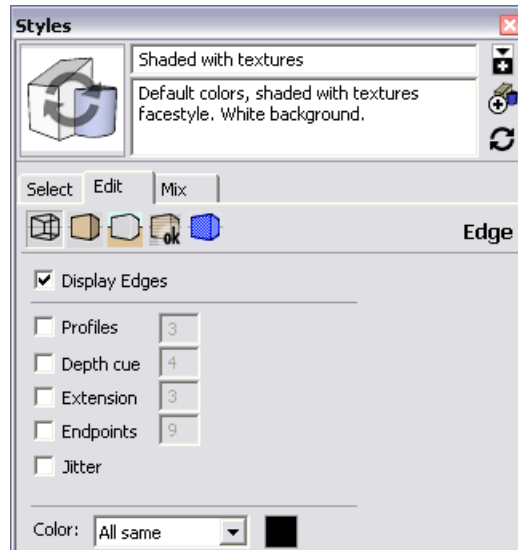
10. Keep tracing around with lines and arcs, until you return back to the start point. When the loop of edges is closed, you will create a face. (If you don't see a face then you may have small gaps between lines and arcs, which you'll have to zoom in closely to see and fix. Or maybe you've drawn some lines in the wrong direction; orbit to face the side of the image, erase anything that needs to be erased, then start again.)



11. The pawn picture is no longer needed, so activate the **Eraser** and click an edge of the picture to erase it.



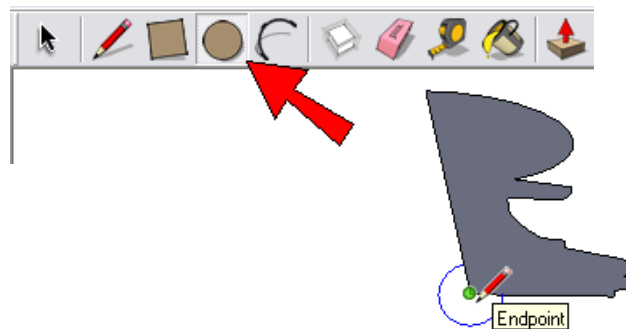
12. If you want to change your edges back (my bright green edges hurt my eyes after a while!), go back to the **Styles** window and change everything back to the way it was.



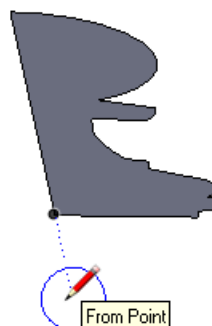
Step 2: Make it Round

As stated on the first page, the **Follow Me** tool is what you use to make round objects. Basically, **Follow Me** takes a 2D face and pulls it along a path, which is how you can make ornate railings, crown moldings, etc. When the path is a *circle*, the 2D face goes all the way around and produces a round object.

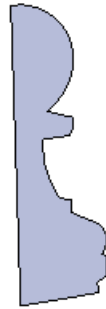
1. So the first step is to create the circle. First, orbit so that you're looking almost straight down on the half-pawn face. Then activate **Circle**, and place your mouse (don't click yet!) at the bottom of the vertical line that divided the pawn picture in half. The circle's preview color should be blue, since it is lying on the "ground."



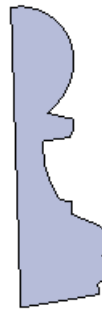
2. If you created the circle right at this point, you'd have to fix some faces later after the round pawn is created. When using **Follow Me** with a circle, it's usually a good idea to draw the circle some distance away from the face, so that the circle and face won't be touching. So move your cursor straight down (in the blue direction), then click to place the center of the circle.



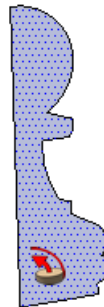
- Click again to complete the circle. It can be any size.



- Before using **Follow Me**, we'll select the path first. So activate **Select** and click the circle, either on its edge or face.



- From the main menu, choose **Tools / Follow Me**. Then click the half-pawn face.



The operation may take a few seconds to complete, then presto - the pawn is created!



- The circle is no longer needed, so erase it. Then you can paint the pawn to match the picture, or add some colors or materials of your own.



You can use the same method to create the remaining chess pieces, which are all basically round except for the knight (the one that looks like a horse). If you're feeling ambitious, you can also create a board with a checkered pattern.

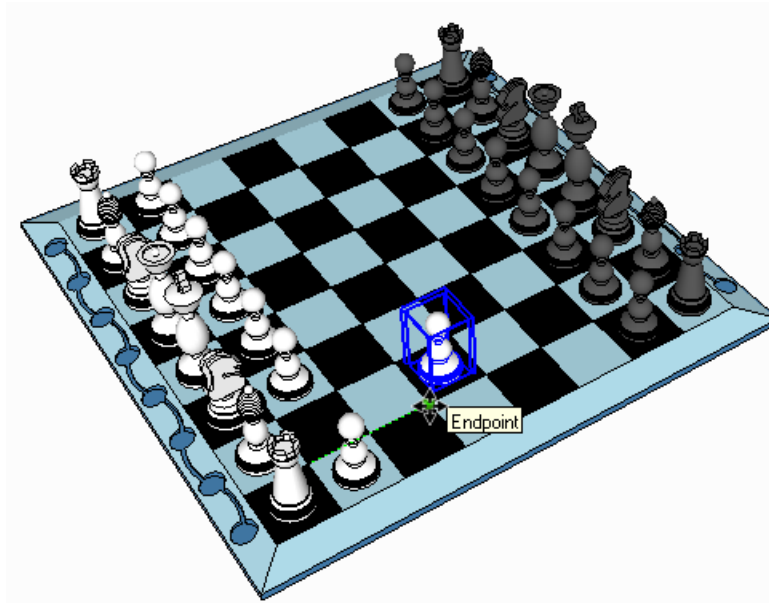
There are many chess sets, complete with pieces, that people have uploaded to the Google 3D Warehouse (<http://sketchup.google.com/3dwarehouse>). Here are a few of them:

Google 3D warehouse Models

3D Warehouse Results Results 1 - 12 of about 198 for chess set (0.2 seconds)

	<p>Chess Set by acad_whiz Made for 3D Challenge 001. It... Download to Google SketchUp 6</p>		<p>Chess Set by mike Download to Google SketchUp 6</p>
★★★★★		★★★★★	
	<p>Chess Set by dotz713 A large, wooden Chess set... Download to Google SketchUp 6</p>		<p>Chess Set Redux by Oz The Wiz Made for the first challenge... Download to Google SketchUp 6</p>
★★★★★		★★★★★	

You can use one of these models, or a chess set you've created yourself, to play an actual game of chess: just use the **Move** tool to move pieces along the board. You can even play with a friend, by emailing back and forth the SketchUp model showing your latest move!



Here's another way to play chess back-and-forth, for those who know their way around the 3D Warehouse: set up a private collection for your chess set model, for which both you and a friend have editing permission.

If you try this project with your children or students, and have interesting round objects you'd like to share, please let me know! I will be happy to blog about it, and maybe feature it in a future newsletter. Contact me at bonnie@3dvinci.net. Thanks!

And if you like using the **Follow Me** tool, you'll love 3DVinci's *Crazy Shapes*, part of our ModelMetrics Advanced series (http://www.3dvinci.net/ccp0-prodshow/MA3_PDF.html).

