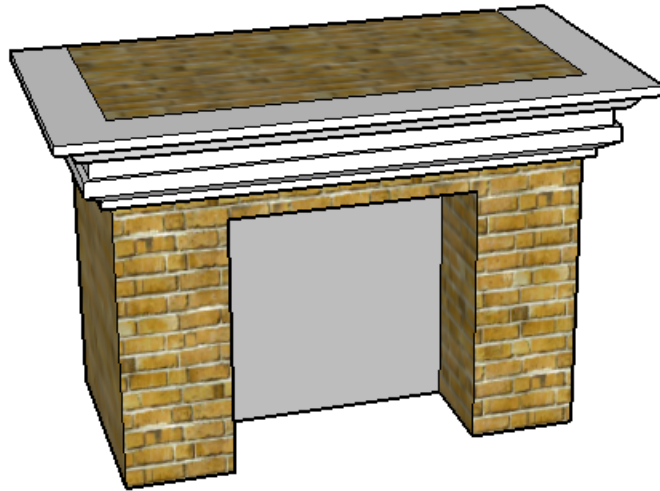


Fireplace Mantel in Google SketchUp

Creating the fireplace itself is quite easy: it's just a box with a hole. But creating the mantel around the top requires the fun-to-use **Follow Me** tool.



This project was created in SketchUp 8, but will work in SketchUp 7 (and even 6).

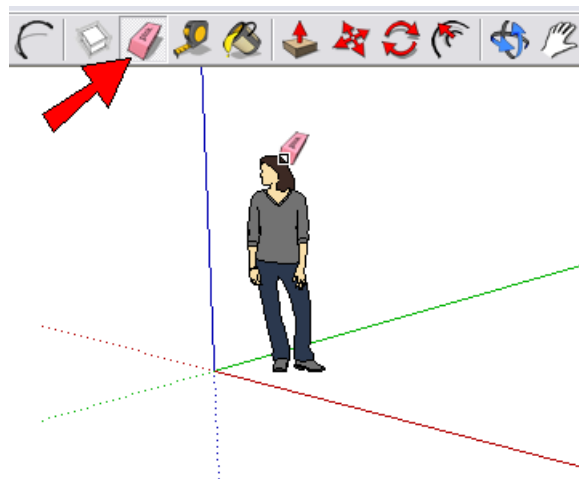
For this project, it helps to have some basic knowledge of Google SketchUp (though detailed instructions are provided). In particular, it's important to know how to zoom, orbit, and pan the view. If you need more information on how to get started, and a description of some basic tools, please read [3DVinci's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

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

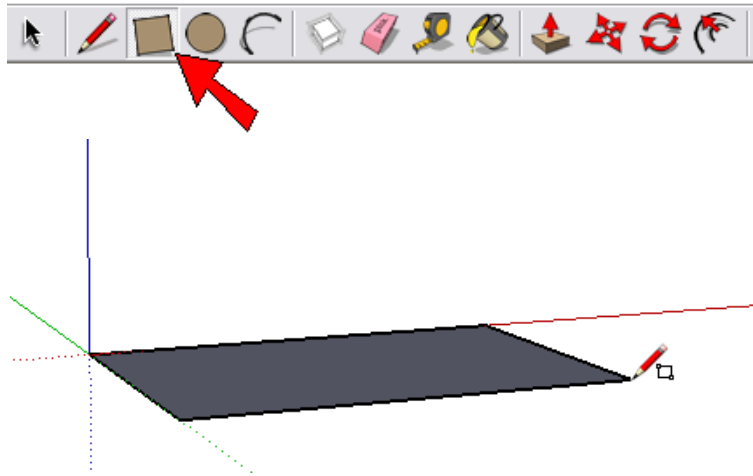
Mac users: go to http://www.3dvinci.net/SketchUp_Intro_MAC.pdf.

Step 1: Create the Fireplace

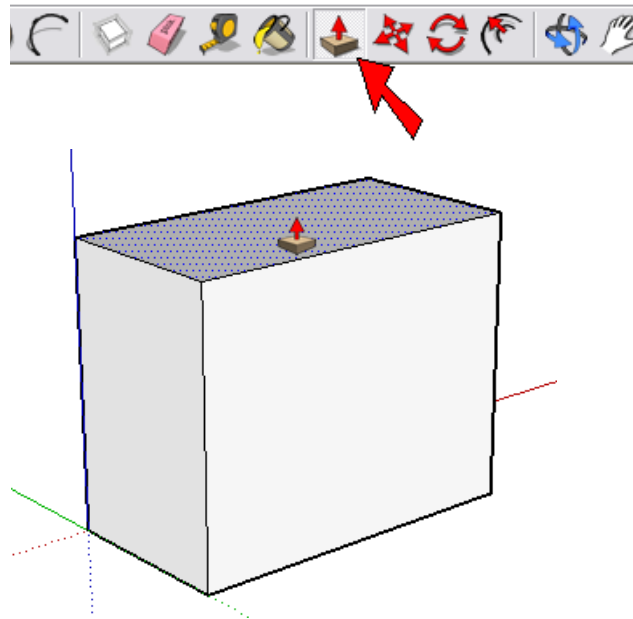
1. Open a new file in Google SketchUp. Depending on the template you're using, you may see a person standing near the origin. We don't need anyone in this model, so click the **Eraser** tool and click the person to erase her (or him).



2. Activate the **Rectangle** tool and draw a rectangle on the ground. This will be the base of the fireplace.



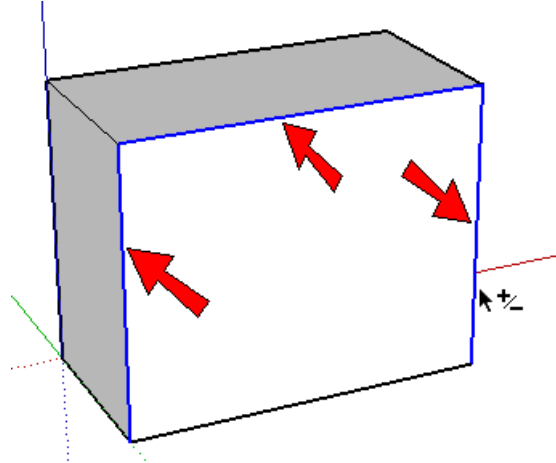
3. Activate the **Push/Pull** tool and pull the rectangle up into a box.



4. To make the cutout in the front of the fireplace, we need to first create another rectangle on this face. We could just use the **Rectangle** tool and draw one by eye, but we'll do it so that the rectangle's edges will all be the same distance from the edges of the fireplace. In other words, we'll be offsetting edges. First we need to select the edges that will be offset, so activate the **Select** tool.



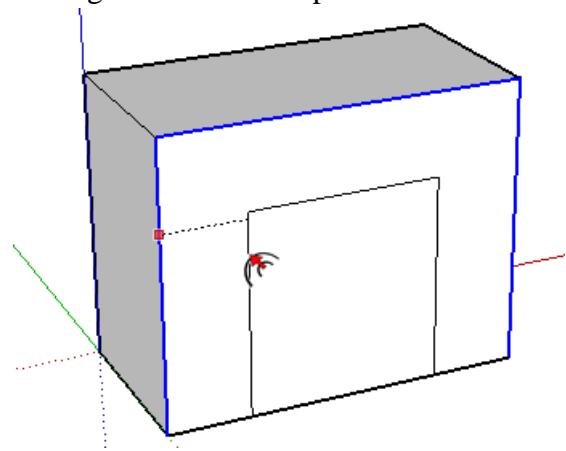
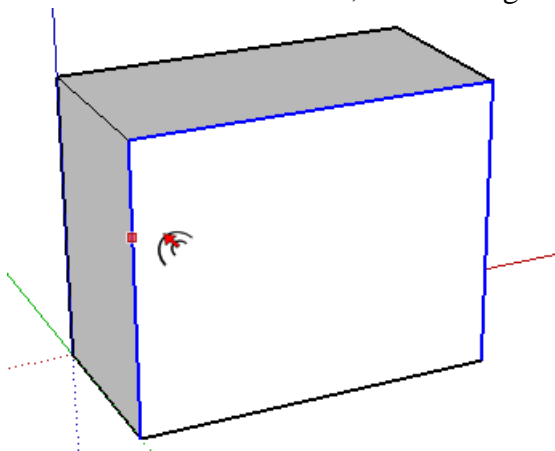
5. Press and hold the Shift key, which enables you to select more than one object. Click the three edges shown below. (If you accidentally select a face, just click it again to unselect it.)



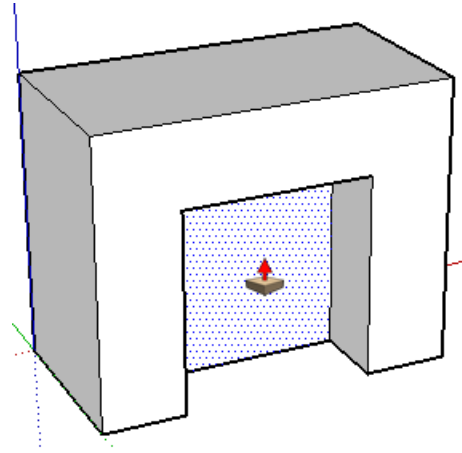
6. With those three edges still selected, activate the **Offset** tool.



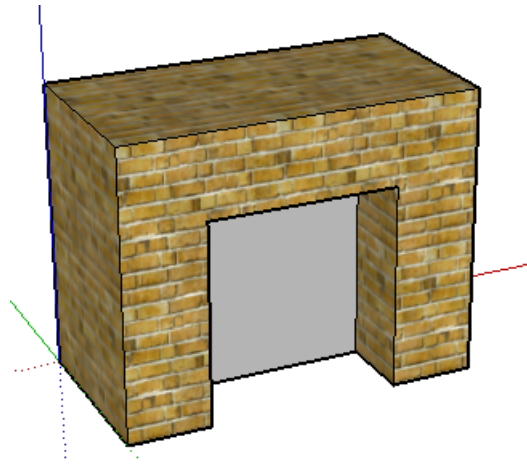
7. Move your cursor around the front face of the fireplace, and a little red dot follows, staying on one of the selected edges (see the picture below on the left). Click when your cursor is near one of those edges, then move the mouse inward, and click again when your offset rectangle looks like the picture below on the right.



- Then use the **Push/Pull** tool to push in the new rectangle. Don't push it all the way through!



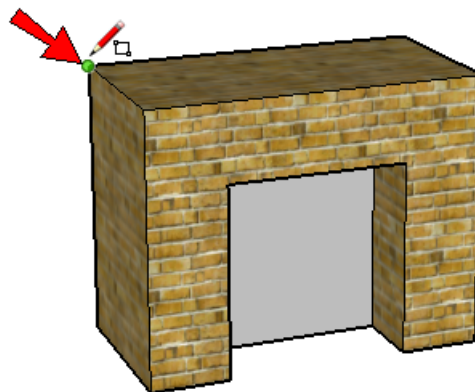
- If you want a more interesting-looking fireplace, click the **Paint Bucket** tool and find some colors or materials to use.



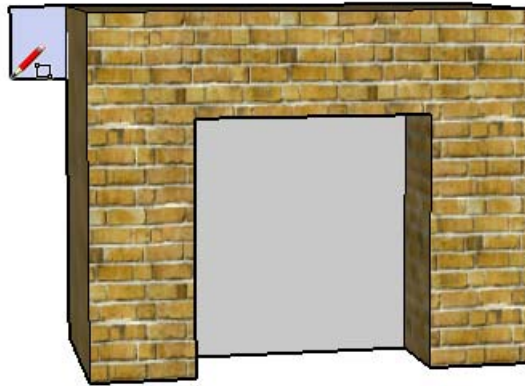
Step 2: Create the Mantel

The mantel will be created by first creating a cross-section face, and this face will be “dragged” along a path with the **Follow Me** tool. So the first step is to create the cross-section face.

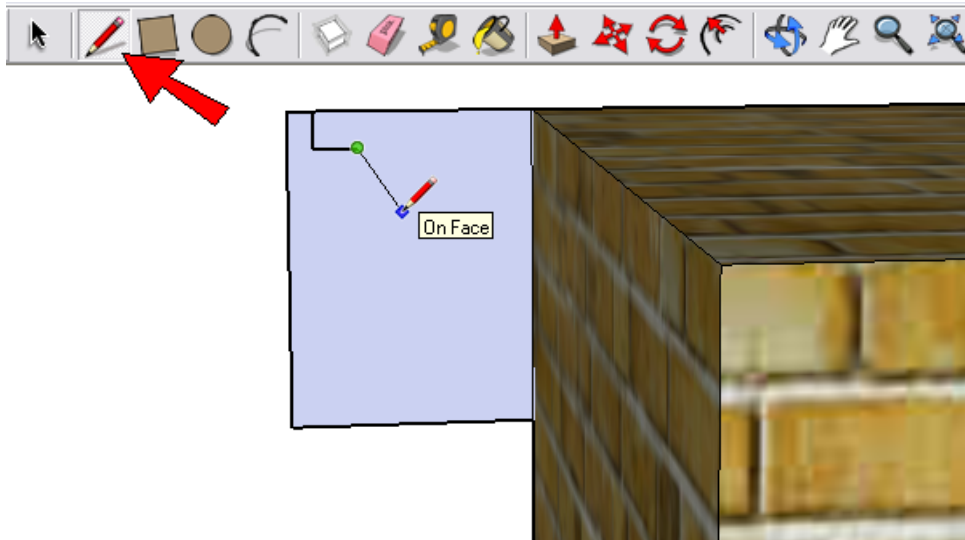
- The easiest way to make the cross-section face is to first create a “dummy” face on which the cross-section will be drawn. (Think of this as drawing on a piece of paper rather than drawing in mid-air.) So activate the **Rectangle** tool and click the first corner here:



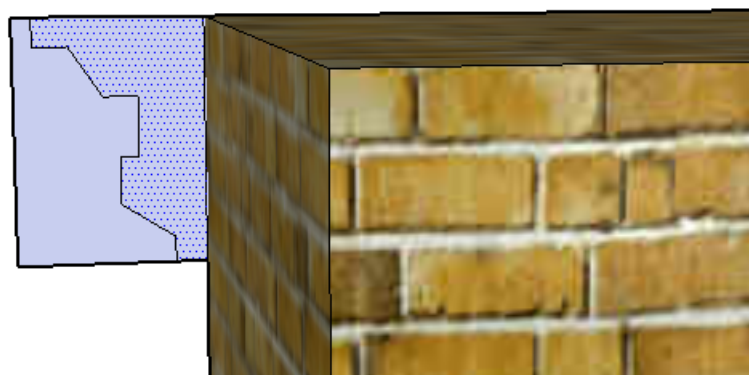
- Orbit so that you are facing the fireplace head-on, and click the second corner of the rectangle so that it looks something like this. Make sure the rectangle ends above the top of the fireplace cutout.



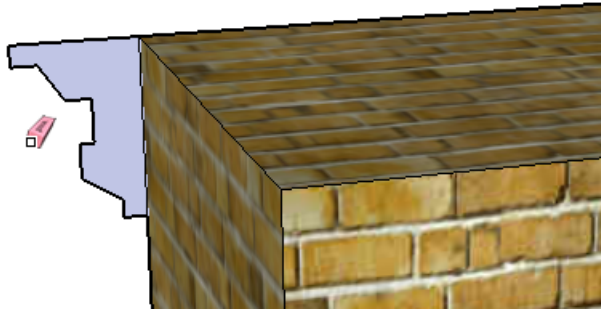
- Now you can get creative with your cross-section. Use the **Line** tool and start making lines on the dummy rectangle, starting somewhere along the top. Be sure to click only when you see the “On Face” popup, otherwise you might make lines that stick straight out from the face.



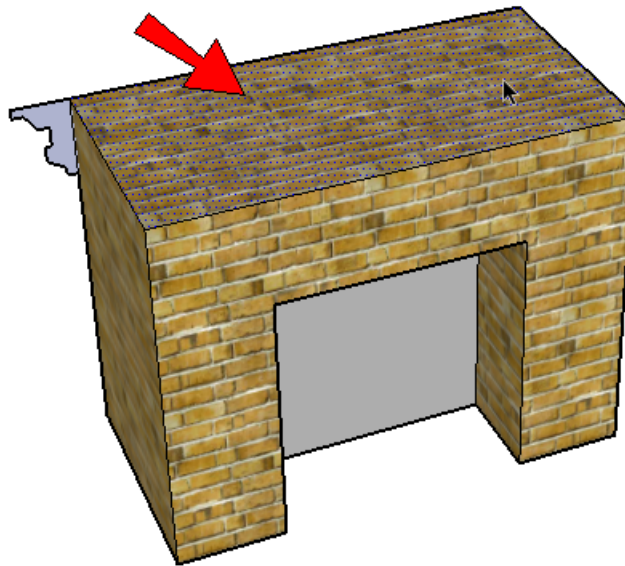
- Keep making lines until you’ve completed a cross-section face like the one shown below highlighted in dots. (If you don’t end up with a face, then some of your lines might be sticking out from the face. Orbit around to check, and erase lines if you need.)



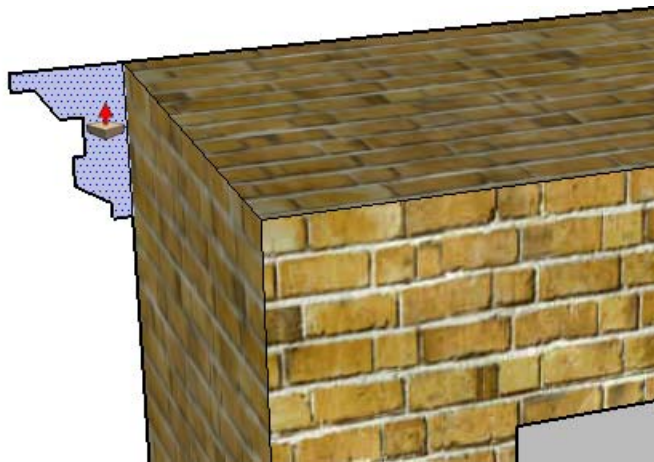
5. The rest of the dummy face is no longer needed. So use the **Eraser** to trim away all of the extra lines.



6. Now it's time to use **Follow Me**. There are a few ways to use this tool, but I find the easiest way is to first select the path that the face will be dragged along. First, let's try something that won't be quite right: activate **Select** and click the top face of the fireplace. When you select a face before activating **Follow Me**, the path becomes all of the edges surrounding the face.

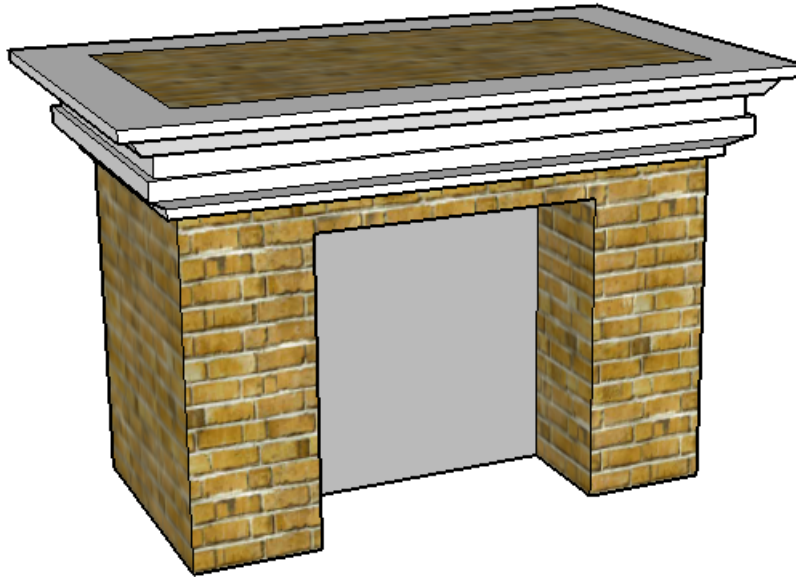


7. From the main menu, choose **Tools / Follow Me**. Then click the cross-section face.

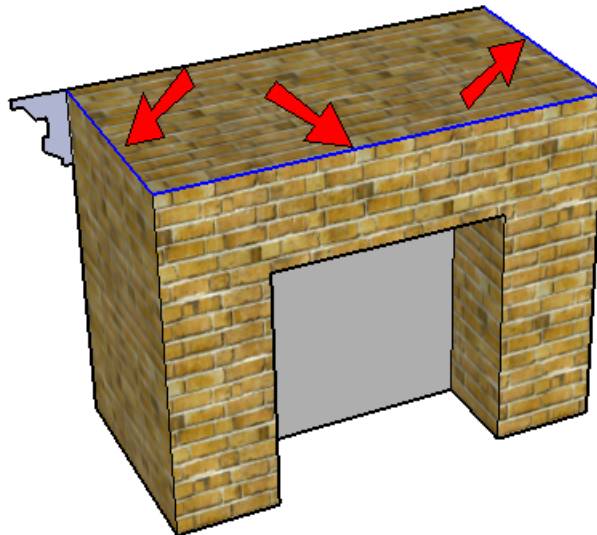


The **Follow Me** tool doesn't have an icon in the toolbar that appears along the top of the SketchUp window. But you can display a larger toolbar that does contain this tool. PC: choose **View / Toolbars / Large Tool Set**. Mac: choose **View / Tool Palettes / Large Tool Set**.

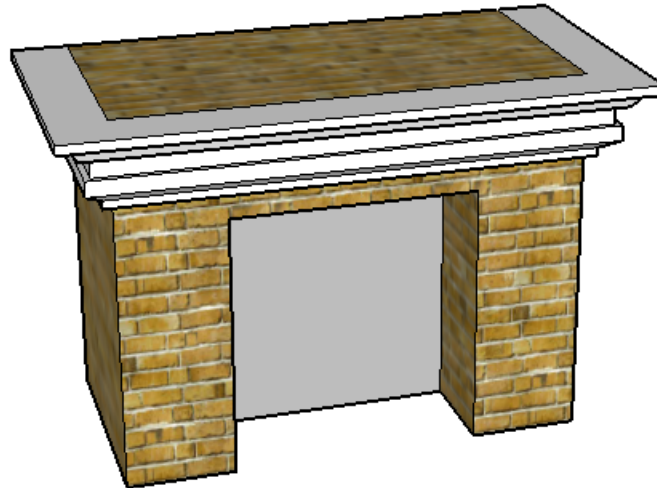
Here's the result: the cross-section goes all the way around the top of the fireplace. But most fireplaces don't sit in the middle of a room; they go against a wall. So the mantel shouldn't continue along the back edge - it should only go along three edges: two sides and the front.



8. **Undo** (Press Ctrl+Z or Cmd+Z).
9. This time we'll select the path again, but we'll select individual edges rather than an entire face. (This is like how we selected edges before using the **Offset** tool.) Activate **Select**, use the Shift key, and select these three edges:

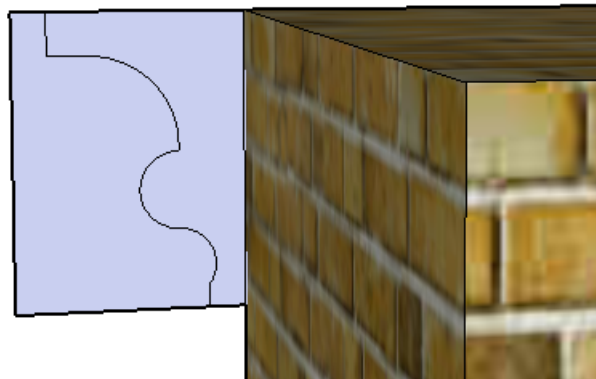


10. Activate **Follow Me** again, click the cross-section face, and now the mantel is correct.

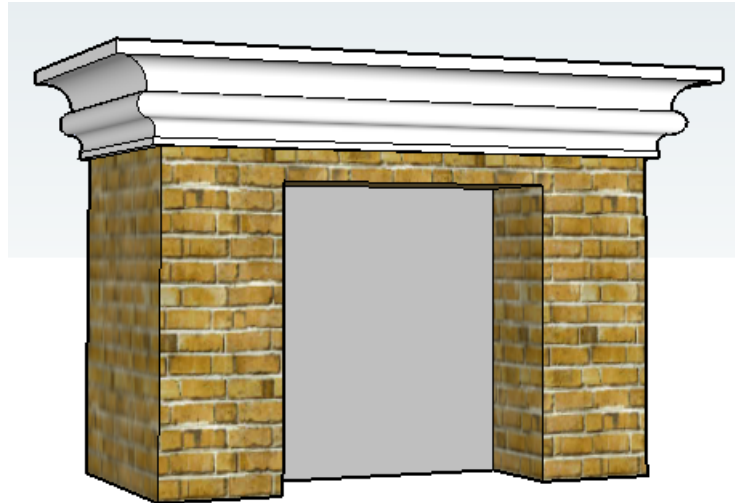


Try This

Instead of creating a cross-section face using only the **Line** tool, use a combination of lines and arcs (the **Arc** tool is shown below).



Here's what you would get - very nice, curvy faces!



If you try this project with your children or students, and have interesting **Follow Me** models 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 enjoy using **Follow Me**, here are two ModelMetricks books that use this tool for picture frames and other geometric objects:

