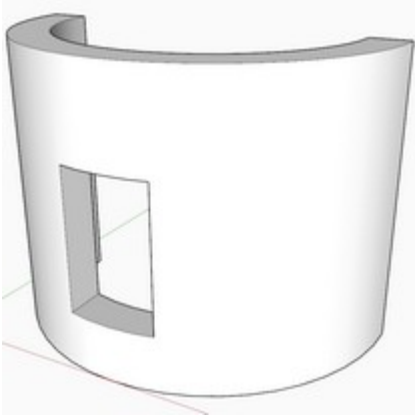


Window in a Curved Wall

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In SketchUp, components can only automatically cut holes on single faces as seen in [Sketchup Window to Cut Opening on a Face](#) tutorial. Even when it comes for openings to cut holes on both outer and inner faces of a thick wall, we need to use workarounds as [Sketch Window to Cut Opening in Thick Wall](#) tutorial.

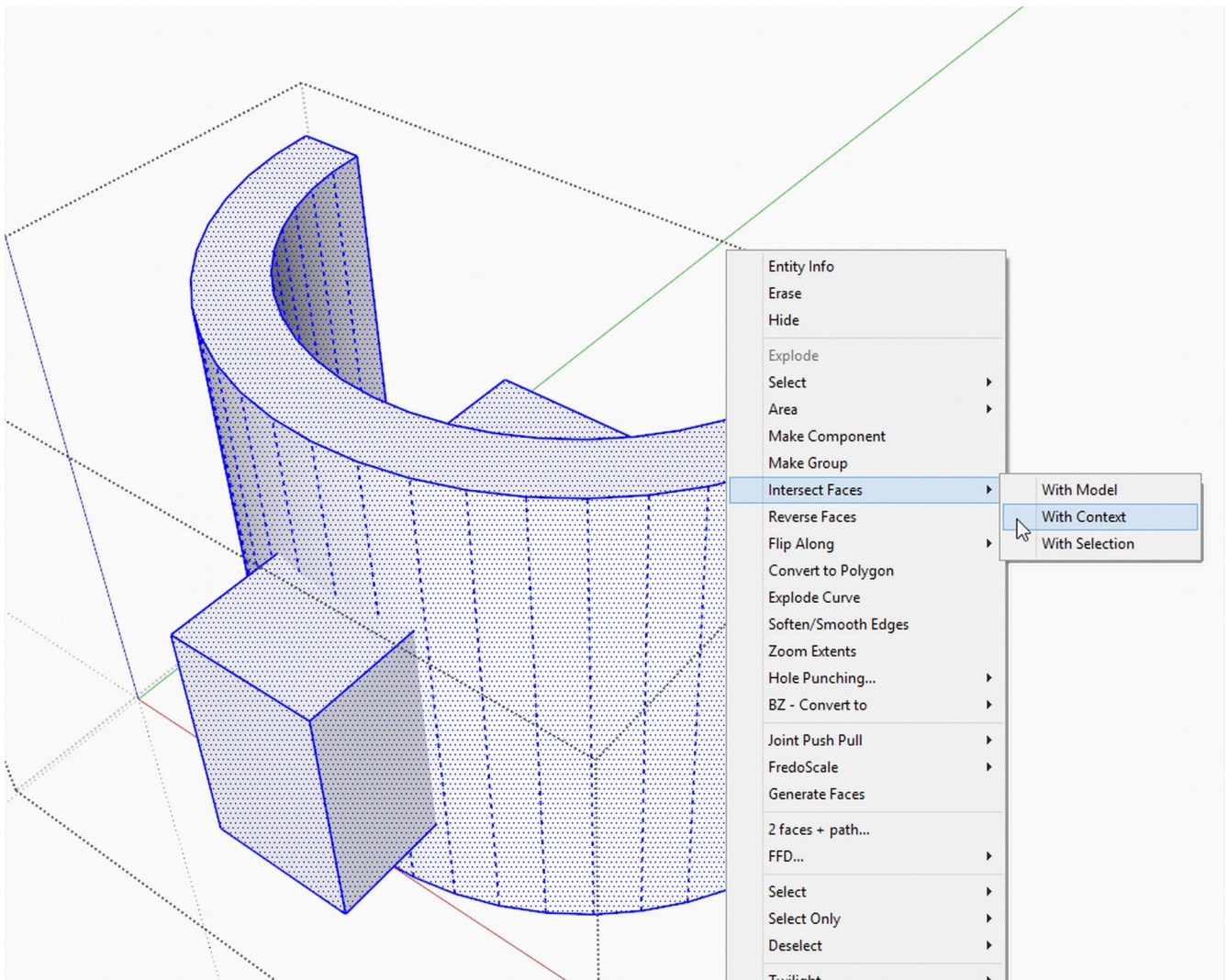
Now as components cannot even cut holes in round surfaces, we need to truly intersect our openings into these objects. In this tutorial, we'll show two ways (one for users of the Pro version and one for those of the Free version) how to cut a simple window into a curved (cylindrical) wall.

Using the Intersect Method

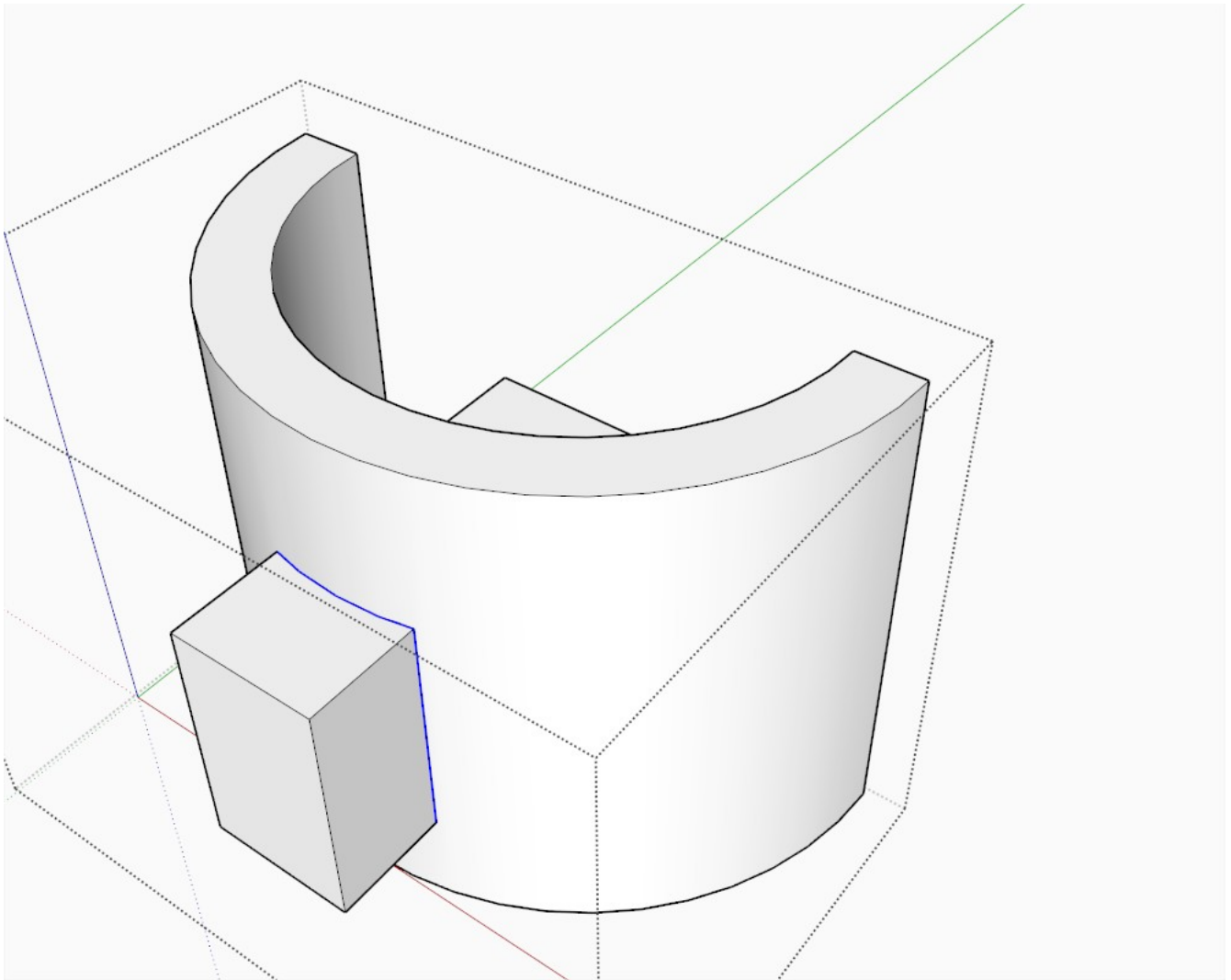
First of all, a few words about intersection: it can only be performed in the same editing context you are in. If we intersected the two groups above while outside of either's editing context (at model level in this case), the intersection lines would be created outside their editing context, too thus not affecting their geometry "inside" - i.e. you could not delete individually cut faces.

Now in order to avoid this, I had already moved my window group inside the curved wall group (Ctrl+X to cut > edit the curved wall group > and Edit menu > Paste in place to paste it into the same place - note that you can assign a shortcut for this like Shift+Ctrl+V to easily remember) then exploded the window group so all its geometry is now in the same editing context as the geometry of the curved wall).

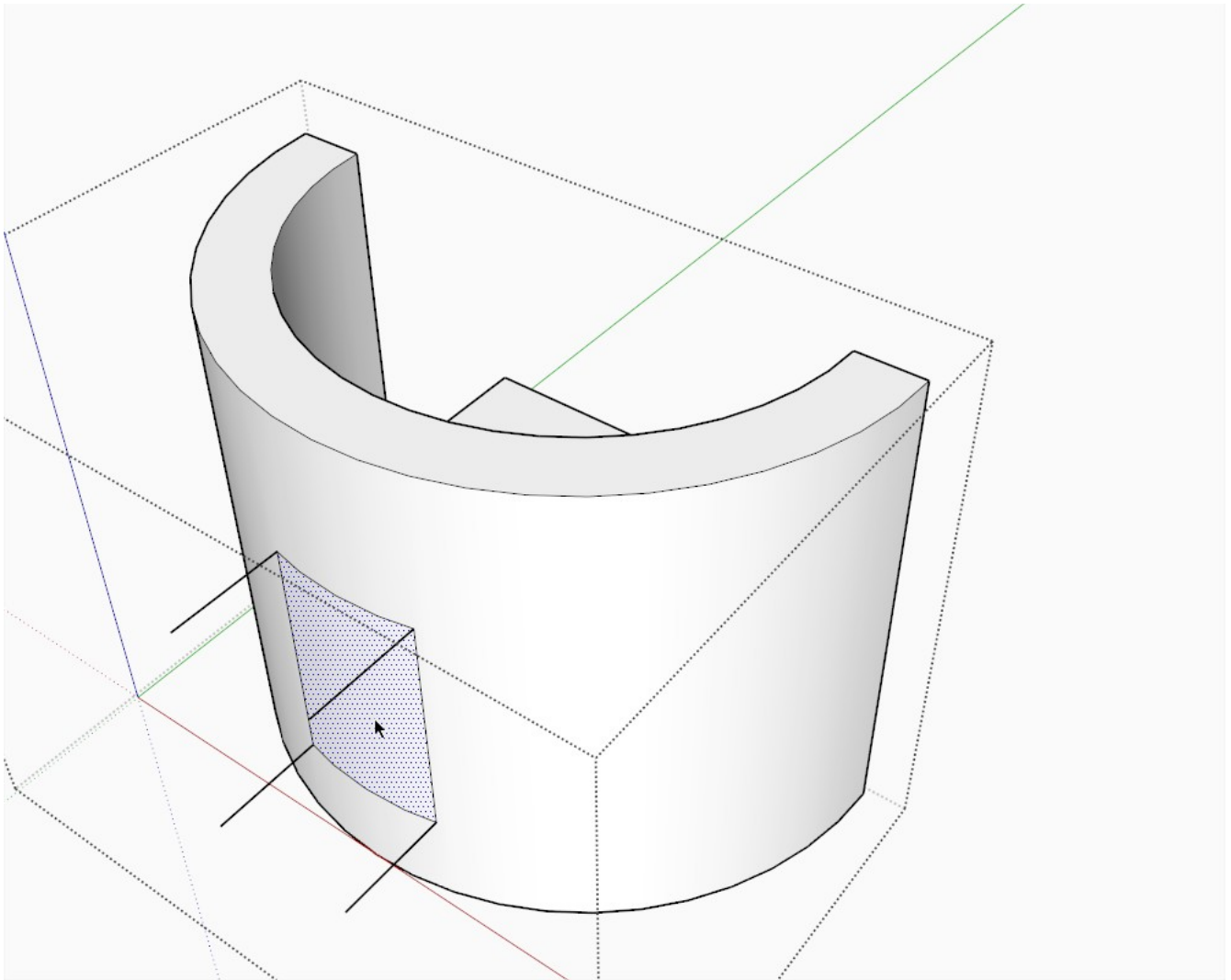
Select all inside (triple click on each the window and the wall while holding the Shift key), right click and select Intersect > with context (in our case). In fact, in a fairly empty model like mine, any of the three choices would work but "intersect with context" will make sure that no other geometry outside these two groups will interfere.



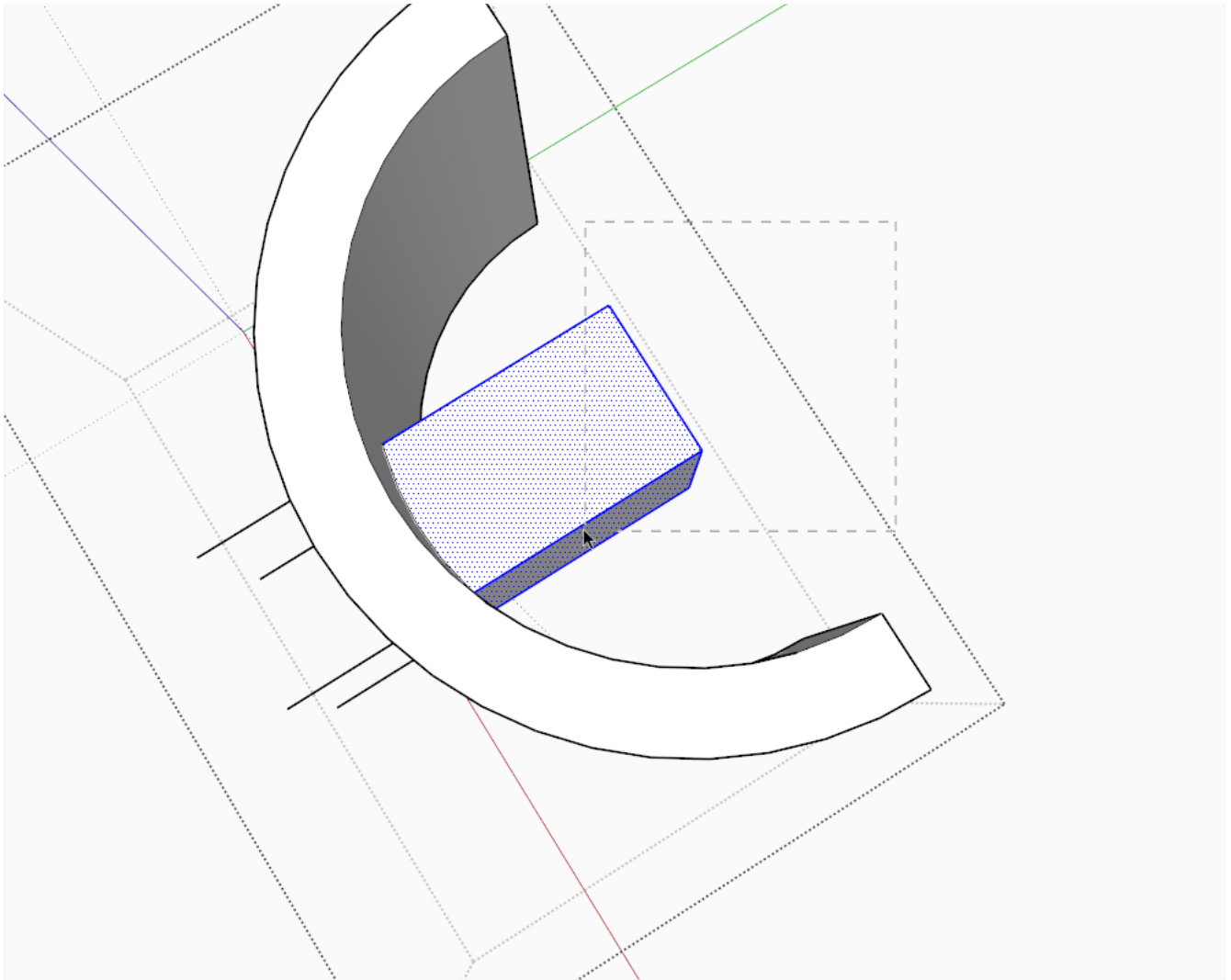
Now after the intersection, you can immediately see the edges that were created (highlighted in blue below) and which now form the edges of faces (and facets in the curved wall) that are nicely separated and can be deleted without deleting useful geometry.



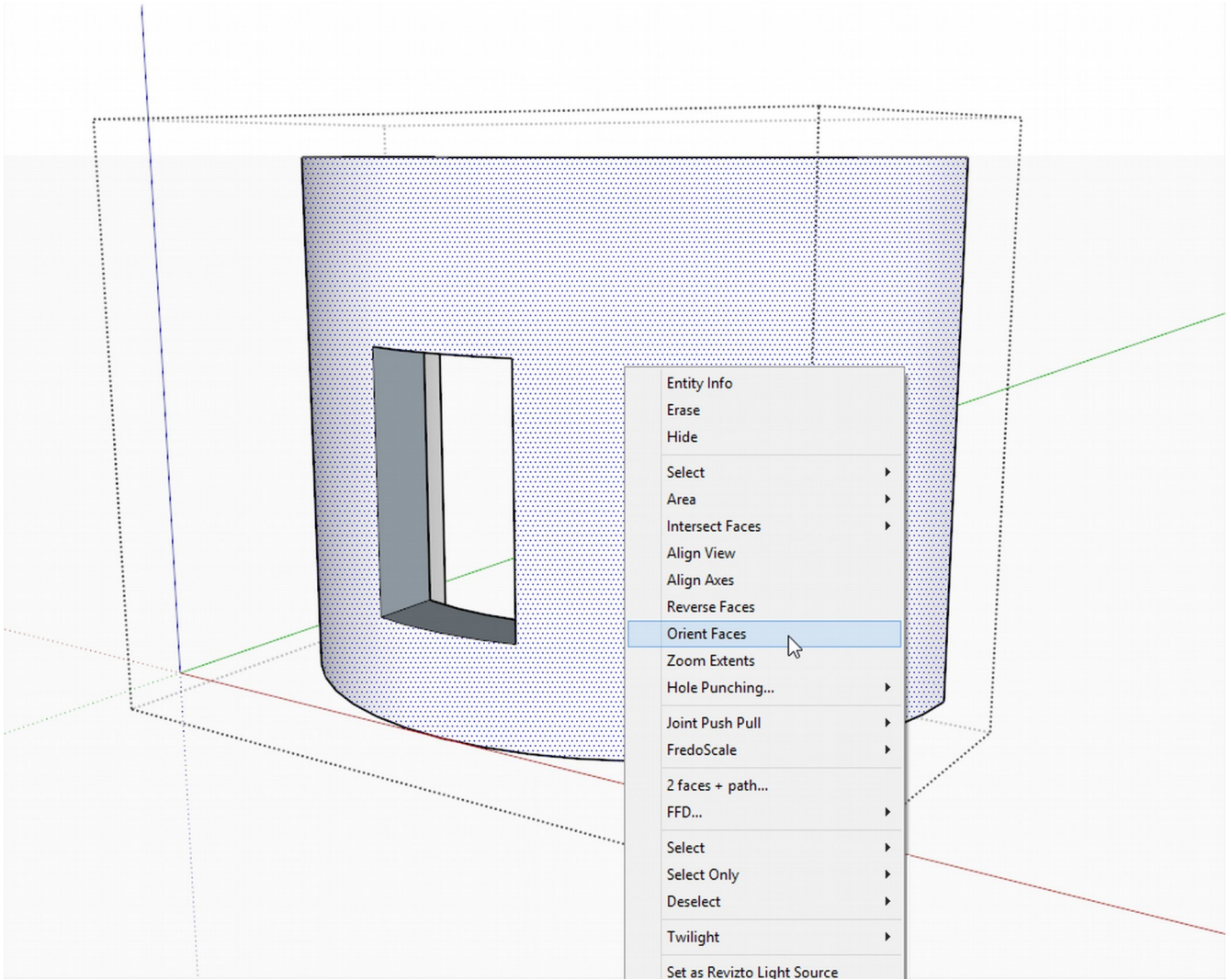
Starting to clean the model up by removing unnecessary geometry. This can of course be a tedious job with more complex stuff but this happens when someone uses the Free version or models in a sloppy way (not with solids).



Sometimes we are lucky and can select whole chunks of geometry to delete together...



Finally we end up with the proper shape but since the original window group used to have its front faces outside and now we can see its inside (back) faces, we have one more step: right click on a properly oriented face and "Orient faces" from the context menu. If you have modelled more or less tidily till now (and your wall is still a solid), this will fix it.



Finally, the clean model with its properly oriented faces.

