Basic Clothing Modeling - The Skirt

Why are we starting out with a skirt? Aren't they the hardest thing to rig properly for Poser? (I can hear the screaming already and we've barely gotten started!)

Do not fear the skirt!

I've chosen to start out with such because this is one of the simplest things to model for Poser clothing. Don't worry about the rigging part yet - we'll have a whole other tutorial devoted to it. Right now, we want to make clothing!

So, fire up your modeling app of choice, and import in the base figure to model around. Now is when you'll want to put the base model on another layer, group the bits together, or however your modeling app does it - find a way to "lock" the base figure into the position it imported at. It is very important that we don't change the positioning because as long as we do everything right at this stage, we don't have to worry about adjusting the position of our new clothing model when we import into Poser later.

Trust me on that one - it's an absolute pain in the rump having to readjust everything when you import into Poser. Been there, done that, saving you the trip.

So here's my base to model around. Since I'm making a skirt, I don't really need her head and arms, so I just selected those bits and deleted them. You can leave the whole figure in...this part is completely up to you.

The easiest basic element to build from for making a skirt is your plain ordinary cylinder primitive. So now, we're going to create one.
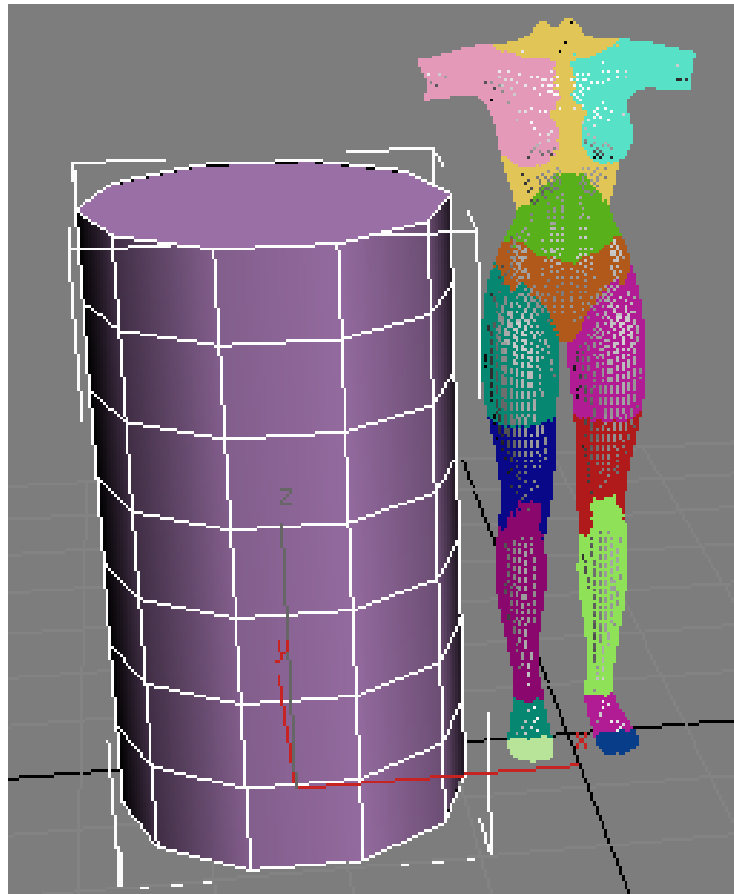

(I now have edged faces turned on - so that's why things look the way they do.)

We want to start out with a relatively low poly base. That way when we go to do a mesh smooth/subdivide modifier our skirt doesn't end up with a higher polygon count than the figure we're modeling around. The cylinder I've crated here has 10 sides and 7 sections. Don't worry about making it too low, as you can always make cuts/slices or edge loops through your existing polys to fiddle with as needed. It's a lot easier to add more than it is to take away.

Don't need the two end polygons at the top and bottom, so delete those. This is also a great time to setup some base UV mapping. Yup, that's right. Why not leave the mapping until the end? Well, right now, we have a very simple cylinder to work with. It has no extra details and it has a nice, clean, unmodified shape. Slapping a cylindrically based UV map on it (hopefully your modeling app has UV mapping tools) right now will save you time later.

But, won't we be changing the shape? You betcha we will - but guess what? The underlying UVs will already be there. We won't have to worry about trying to work around all our modeled details with the UVmap, just making little adjustments if needed rather than having to do the whole thing from scratch at the end. This might take some experimenting to find the best work path with your modeling app, but the more you can prepare before the final model is done, the easier it will be in total.

After deleting the top and bottom polys from the cylinder, I position it with the figure roughly in the center. Doesn't have to be exact, because our figure is certainly not perfectly round and we'll be adjusting things to match at the waist and the whatever shape we want the skirt to be.
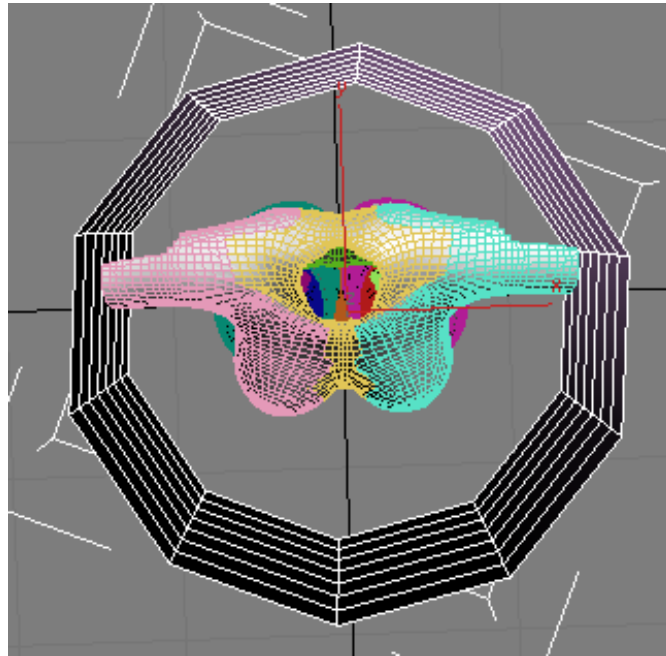

With skirts, I generally work from the top (waist area) down. The initial stage of this is to get the rough shape worked out. Don't worry about making everything perfect just yet, that will come while working with our mesh smooth/subdivide modifier. Working either with vertices or edges, scale and adjust to fit them around your figure and to take on the shape of the skirt you're wanting.
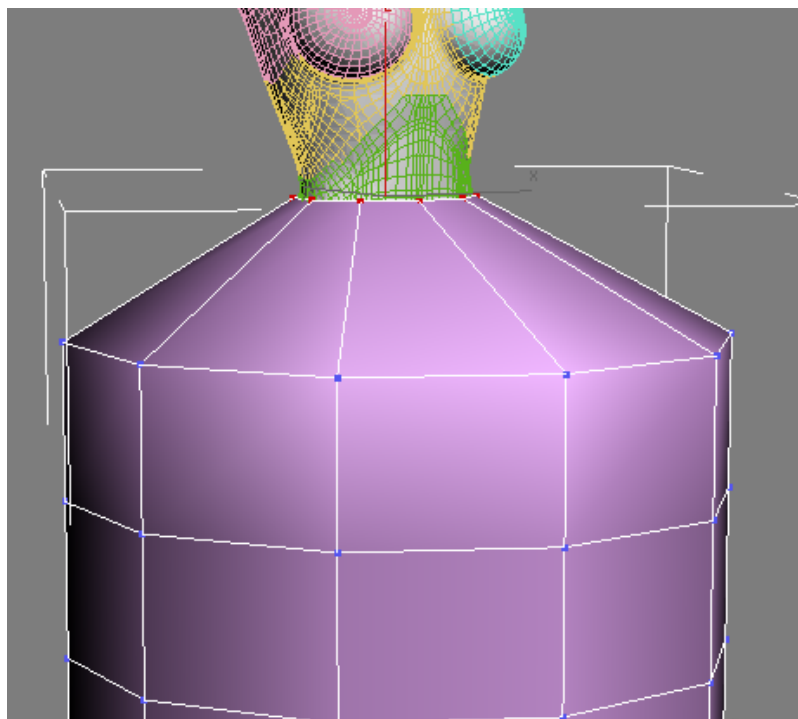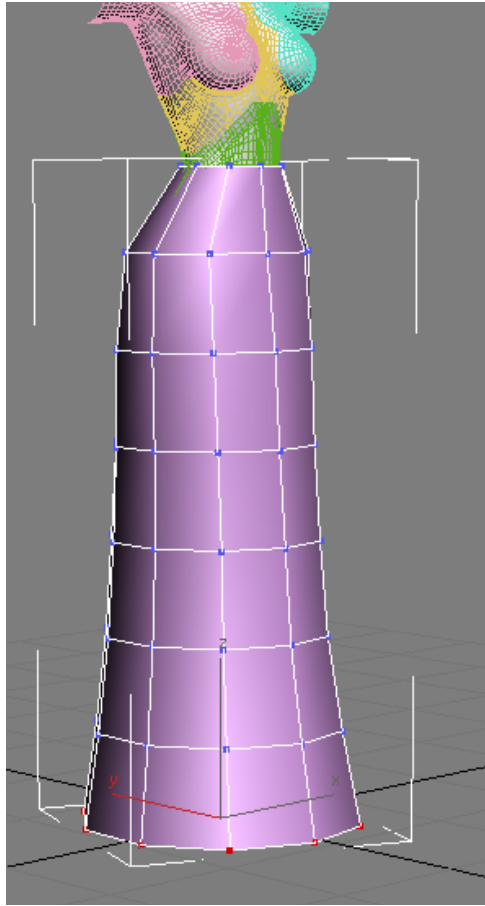
And here's a rough skirt base. If I want it shorter, all I have to do is either move each row of verts up, or simply delete rows of polygons starting at the bottom until I reach the length I want.
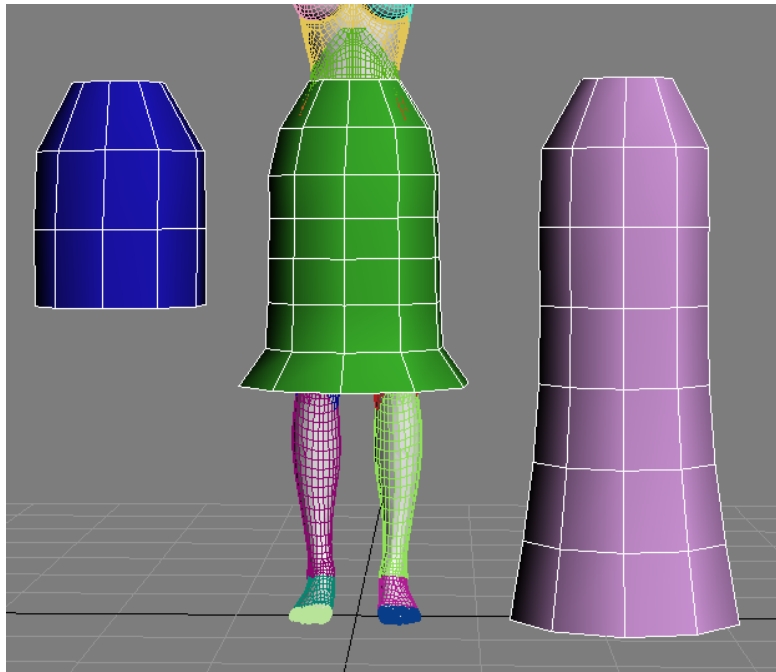
For the blue one, I simply deleted the polygons I didn't want. On the green, I moved up and readjusted each section. And the purple of course is the initial rough shape I started out with.

Here, I've refined the shape of the green skirt a bit more - just by scaling and moving the verts around. I've also applied a mesh smooth/subdivide modifier so I can see how it may look when closer to being finished. If your modeler allows you to continue working with the low poly base with the subdivide preview - great! This really helps when doing final adjustments and tweeks. If not, you may have to go back and forth between your low poly base and what it looks like after smoothing. I see on mine I have a few areas to fix...because I don't want her body sticking out at odd places.
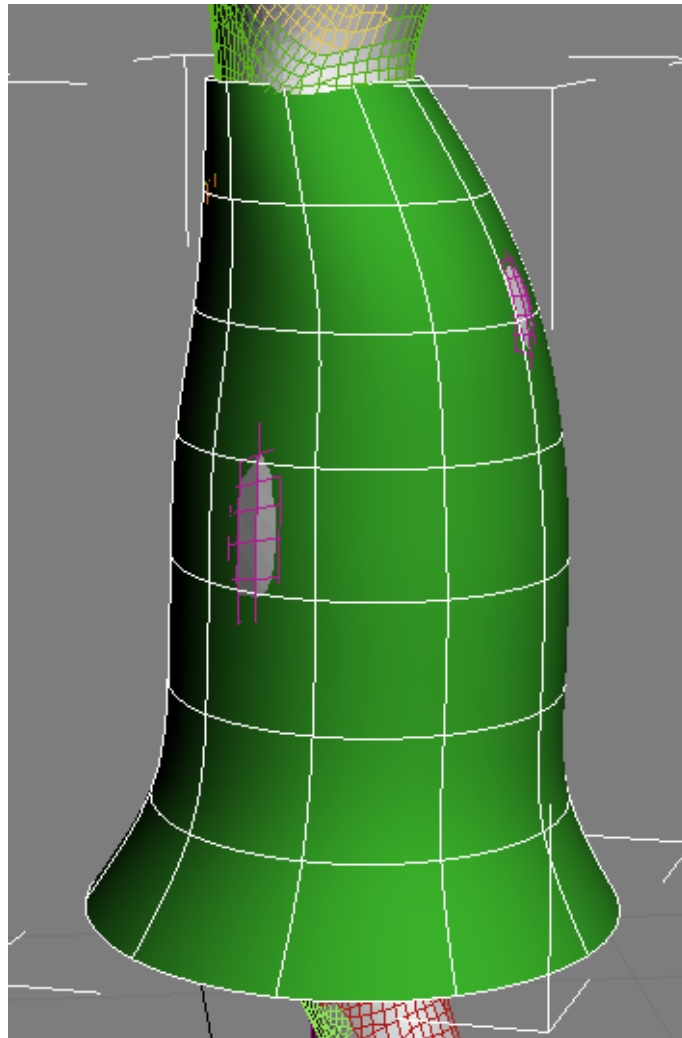

With a few more adjustments, I don't have her body poking through, and I have a pretty decent looking little knee length skirt started. And it didn't really take all that long (well, longer if you're trying to model and teach by typing at the same time...)
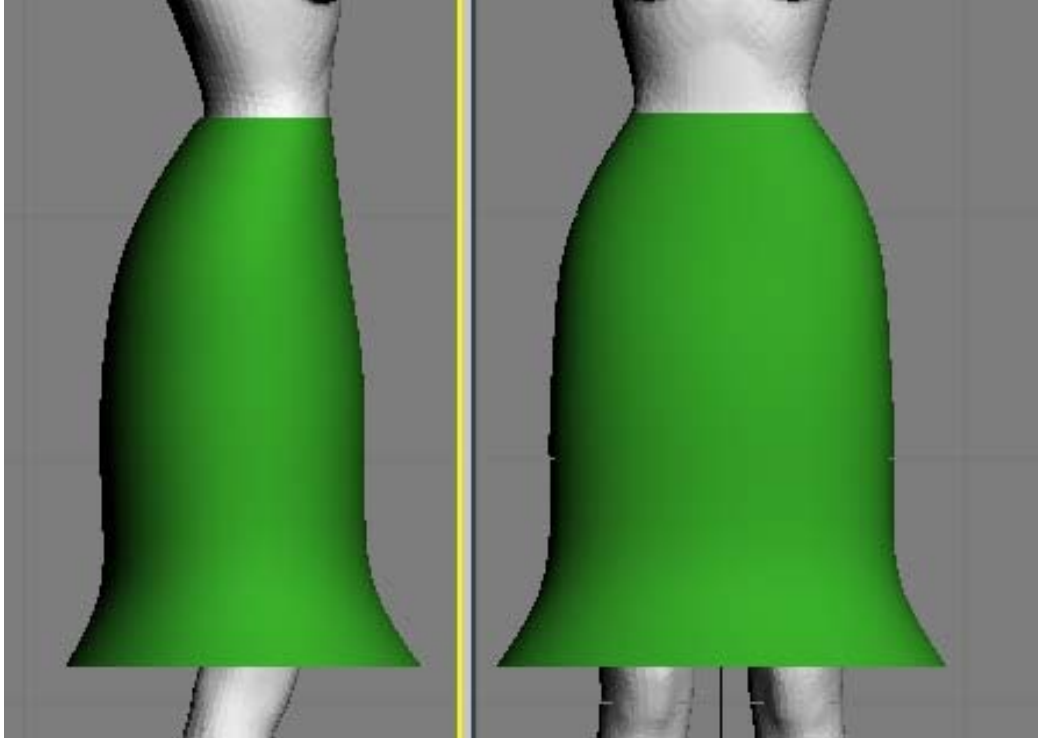
See, I told you skirts were pretty easy. It's still rather "blah" looking though isn't it...well, we could add a waist band at the top with some polygon cuts and some extruded faces on our low poly base.
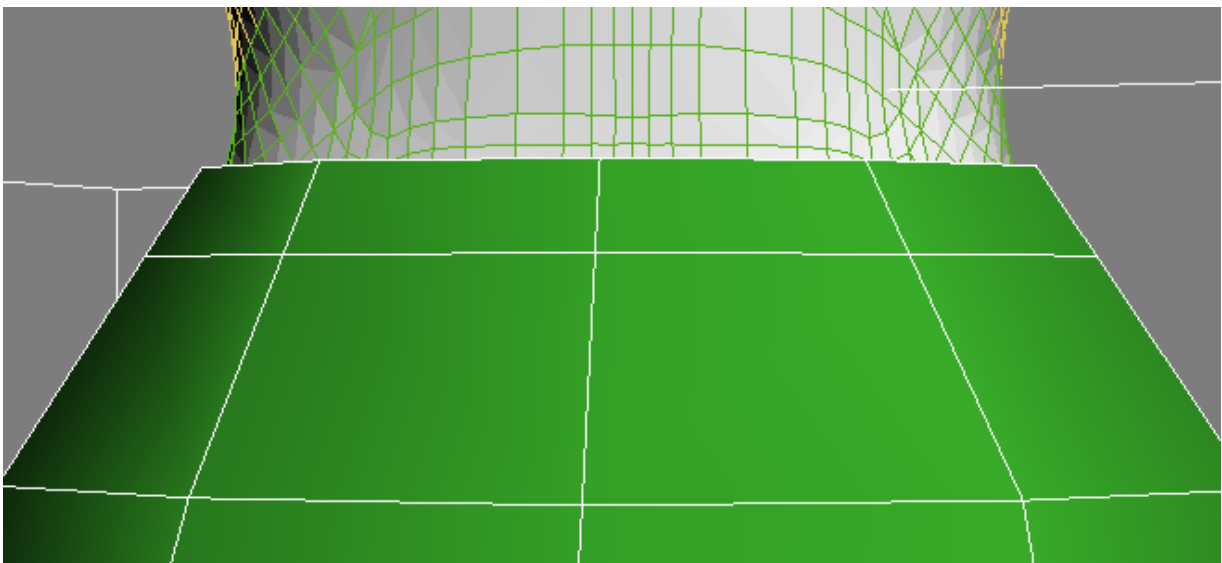

So here's my initial cut for the waistband. You should have some sort of polygon cut/slice tool, or another way to do it is to connect parallel edges. Now, we need to select that top ring of polygons and extrude them all together as a group. We don't want each individual one extruded out (that would make for a very lumpy looking thing...unless that's really what you want, then by all means, extrude away).
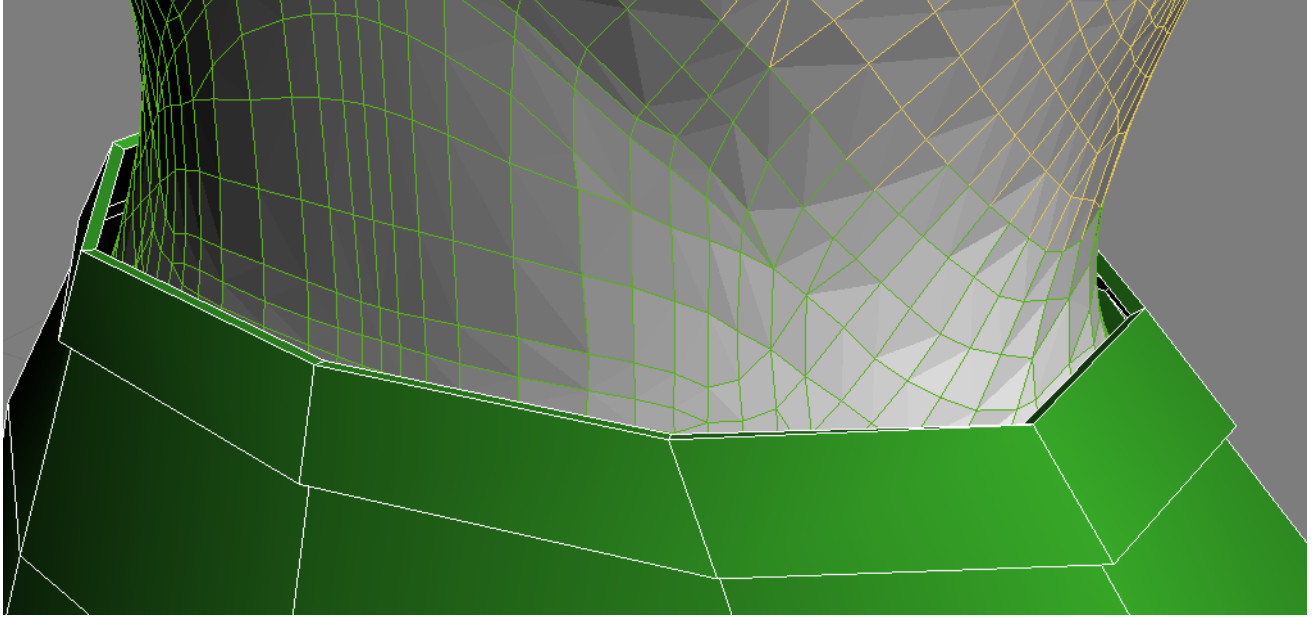
And here's the extruded results before smoothing. It doesn't need to be real thick, just enough so that it doesn't look like you took a piece of paper and wrapped it around the figure. Adding elements like this, or trim, or seams, or a hemline can give your model the simple little details a lot of Poser content is lacking.

This is how it looks after I turn smoothing back on. This is ok, but what if wanted a clearer definition between the waistband and the skirt? Fear not, as this can be easily fixed. Remember the cut we did to start the waistband? If we add another one close to it, the smoothing process will have less distance between polygons to compute, which gives us a more defined look.
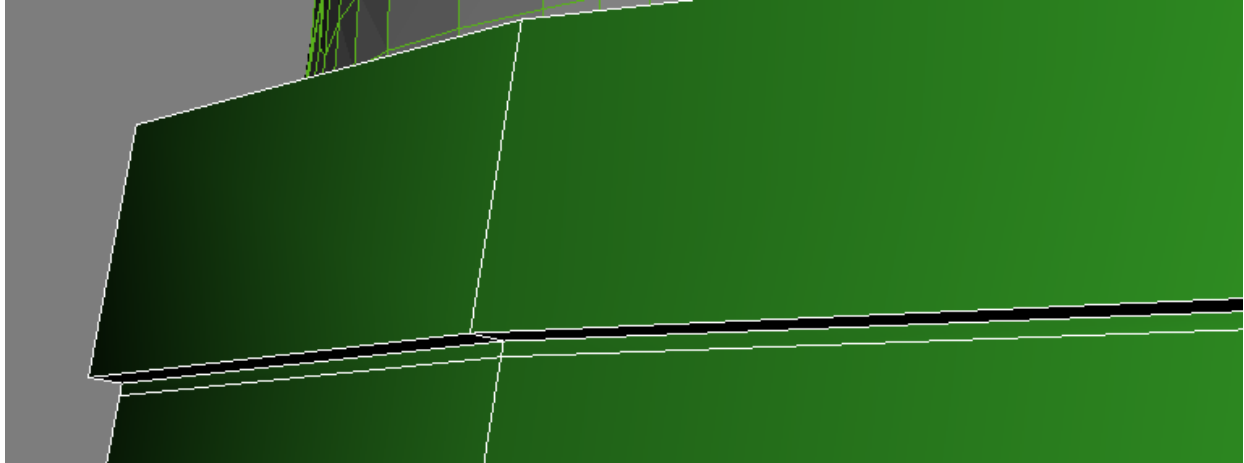
Here's my second slice, placed close to the first one that became the area for our waistband. Now see the results when smoothing is turned back on.

Looks a whole lot better, doesn't it? I have a nice distinction between the waistband and the rest of the skirt now. You can use this type of process to create trimmed edges on other garments (the edge of a shirt collar perhaps) as well as making something look like it has a hem, a seam...or anything else you can think of.

Remember our simple UV map from earlier - now since adding in the extrude here, we'll probably have to go in and adjust that part - but we really won't have to mess with the rest of the skirt. And that's the beauty of doing some things at the beginning before we worry about the shape of our model.

I highly recommend finding a tutorial specific to your modeling app on working with its UVmapping toolset. If it doesn't really have any, then you can go the UVmapper route. There is a free base version you can download, as well as a pro version with more tools available for purchase. Or any other stand alone UV mapping tool...there are plenty of options, but I'll leave that for you to find what works best for you.

I do all my mapping in 3dsmax, as once I figured out how to use them, the tools were excellent. I then use the free version of UVmapper to generate the templates for texturing. But back to modeling we go!

Here, I used the same technique as the waistband to give it the look of trim down at the bottom, and by playing with the positioning of the bottom most vertices, I gave it a bit of a ruffled look. What's the key to this? Just grab an element of the mesh move/scale it and see what happens, if you don't like it, hopefully your app has an undo function to revert back to before you moved things. Then rinse and repeat until you find the look you want.
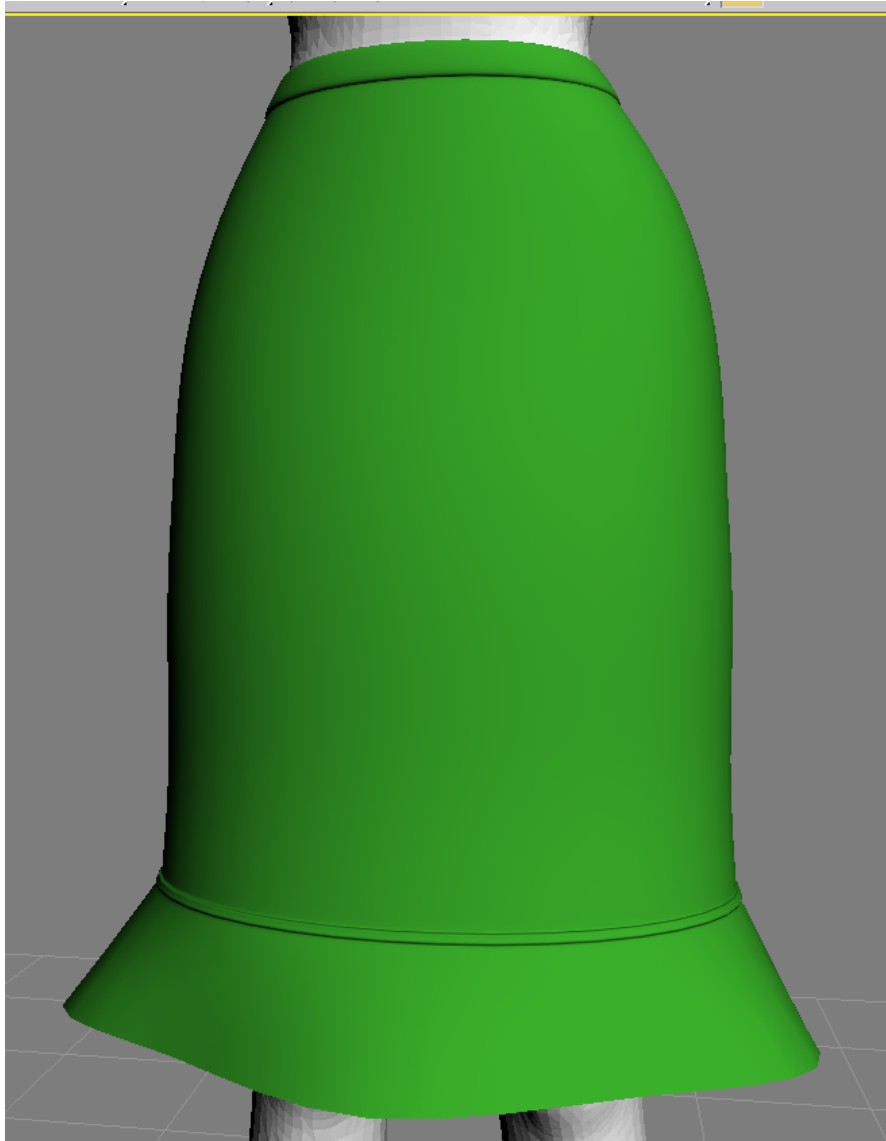
Now before we can call this 100% finished, we still need to assign material IDs to our mesh. Do we want the whole thing as one material? For simple things, this works great. But on my skirt up there, what if I want the waistband, trim, and bottom ruffle to be different materials for different looks in Poser? You should (hopefully) be able to select certain groups of polys to assign specific material zones to. Then, when you export the obj file out, the material IDs should remain with it.

If your modeler does not give you the option to export with material IDs intact (though most modeling apps certainly should) you can assign the material groups either in UVmapper (not sure about other UV apps) or with the group editor in Poser.
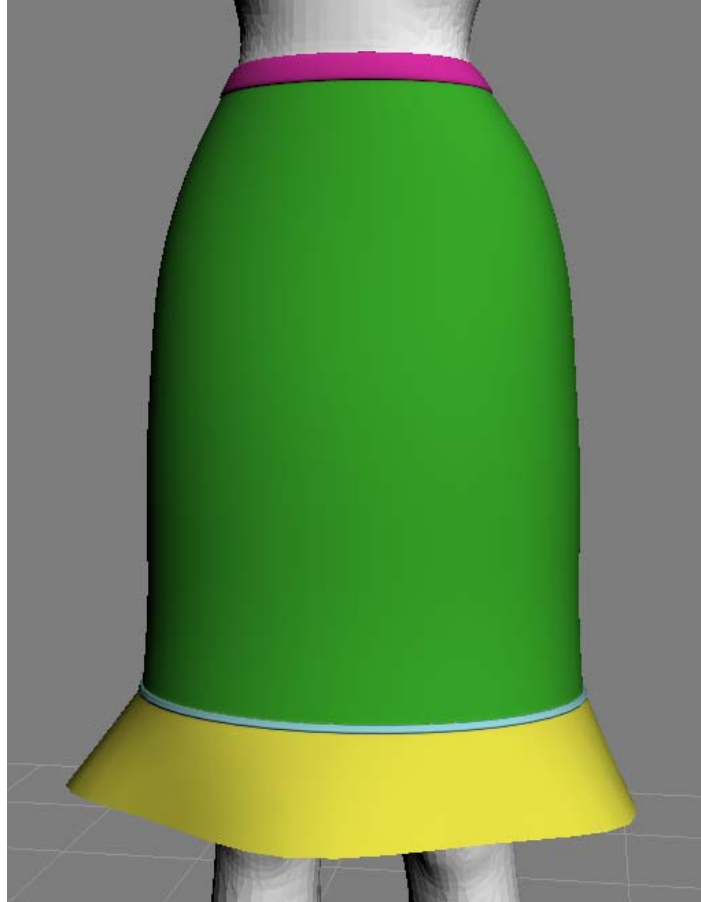
And here's my skirt, with material zones for waistband, skirt, trim and ruffle. This means users can have all sorts of fun with various textures and procedural materials when they go to render.

Now, what about skirts with slits, or a kick pleat in the back? Well, why don't we take a look at something like that.

Whoops...time for another filler smilie. (c'mon, you know you missed seeing them)
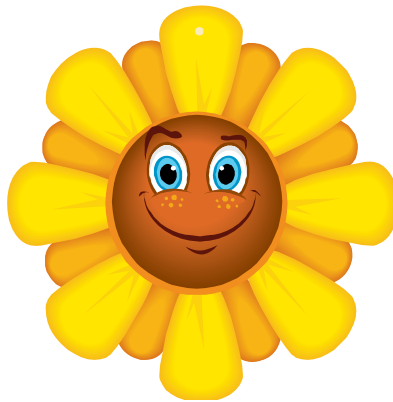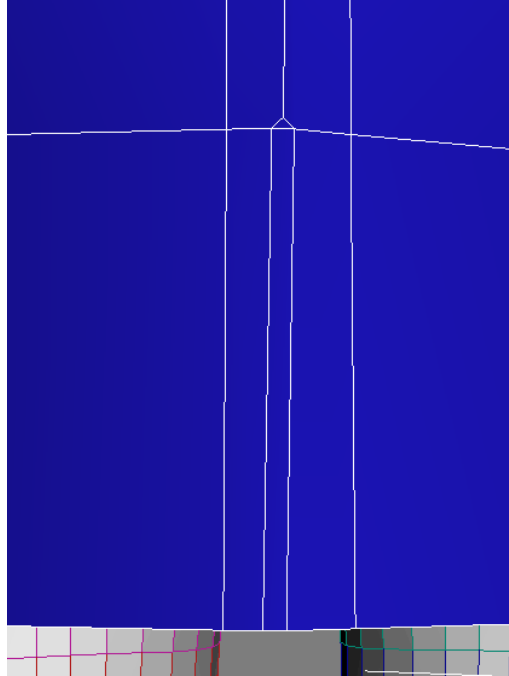
To prepare the area for the open slit on the back of the skirt, I made a slice on either side of the edges running down the center . I then did a small chamfer on the middle bottom edge. The skinny polygon in the middle I'll delete to create the start of my pleat opening.

Now, I want the edges of this to have some thickness, but I don't want it to look like the trim or the waistband on the last skirt. So this time, I'm going to select the outer edges and extrude them a small distance inward. Slap a mesh smooth on it, and it doesn't look too bad.
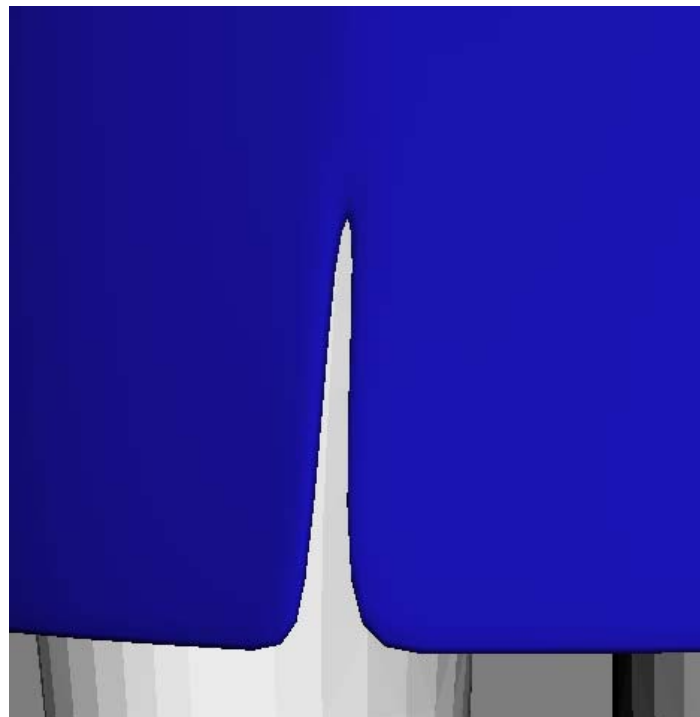
What's that? You don't want the edges to look so rounded? Well, that's easily fixed by chamfering (a very small chamfer) the corner edge of each, or doing some cuts similar to how we did that waistband earlier. Experiment and see what you like best!

Here's my chamfered corners before smoothing:
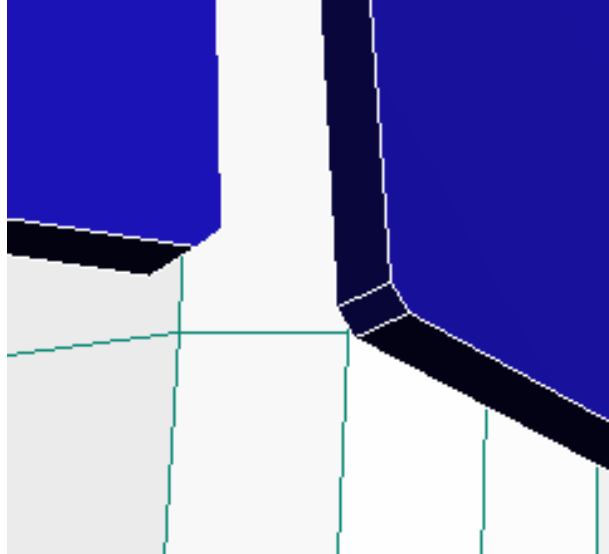
And here's the chamfered corners that give me a sharper look after smoothing:
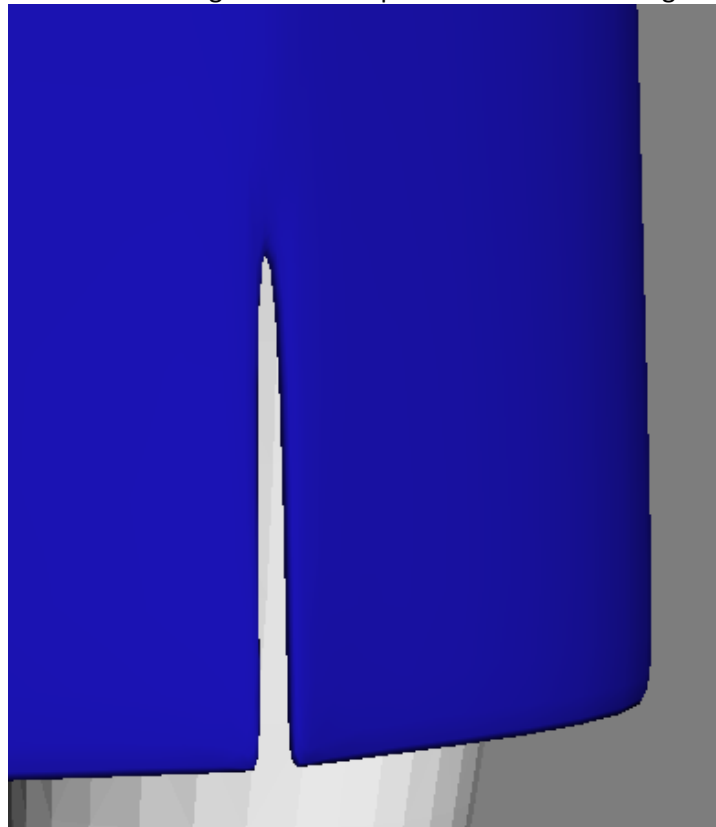
Now, for a kick pleat where the sides overlap, we start out the same as for our slit, but we need to do a couple things differently. This time, we need to take the two edges of our opening, and extrude them out a bit so they overlap each other but remain separate. Pick one to go on top, and the other to go underneath.
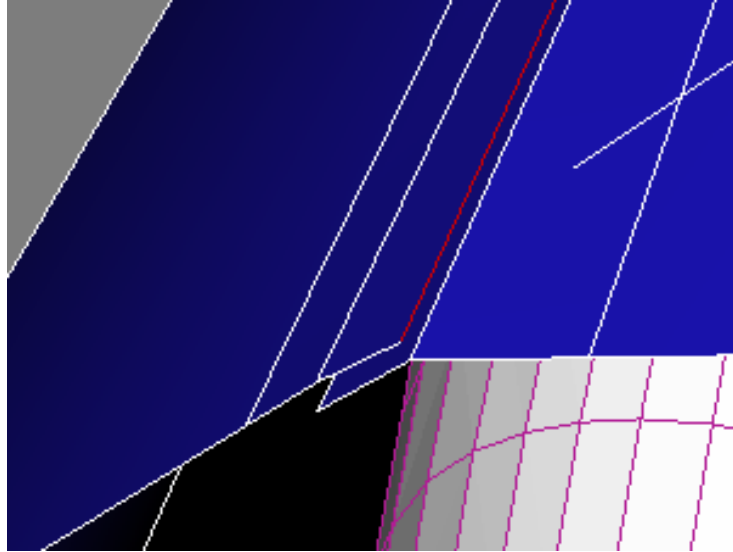
At the top of our kick pleat, we're going to need to weld one of the top vertices back to the skirt where our inside piece starts.
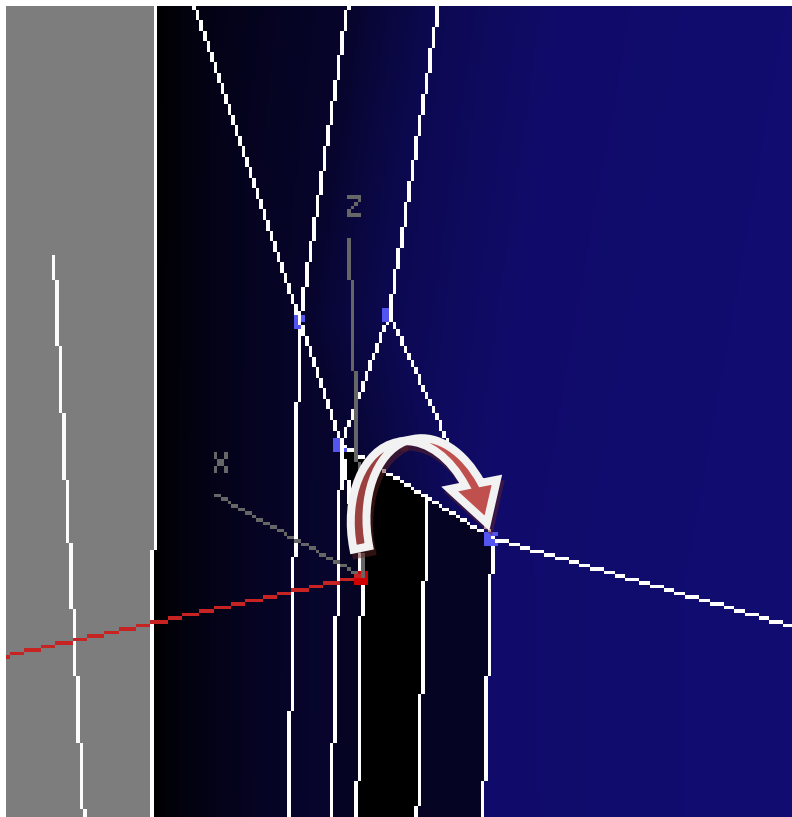
You may need to adjust the positioning of the inside flap, but do another edge extrude to the inside, and fix the corners as desired like the simple slit from earlier.
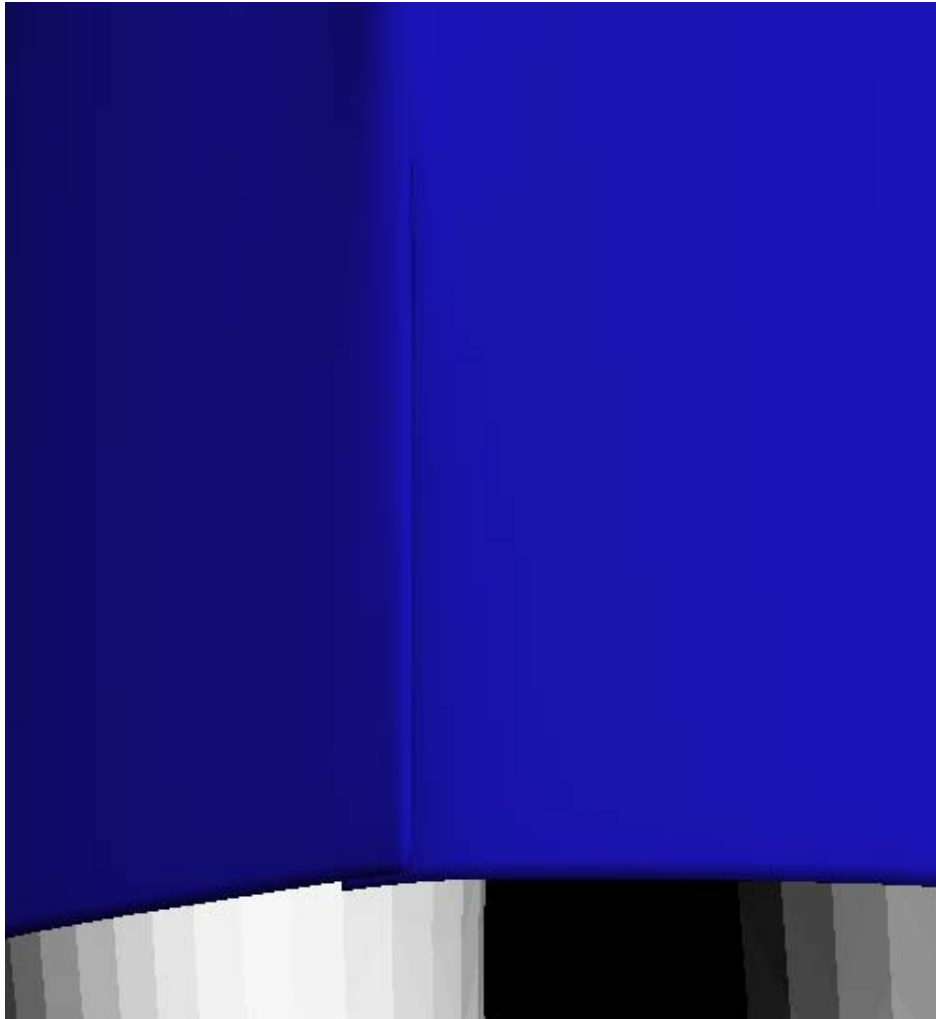

See, now that you know some basic tricks, you can modify each one of these to fit your needs and the look of the project you're doing. By just changing the scaling and positioning of edges and vertices, you can accomplish all sorts of looks.

Add some trim, make a copy of a ruffled section to layer on top or underneath - anything you can think of to do!

To end things, some parting shots of the same base skirt shape I made initially, just with variations of scaling and positioning to get different looks.
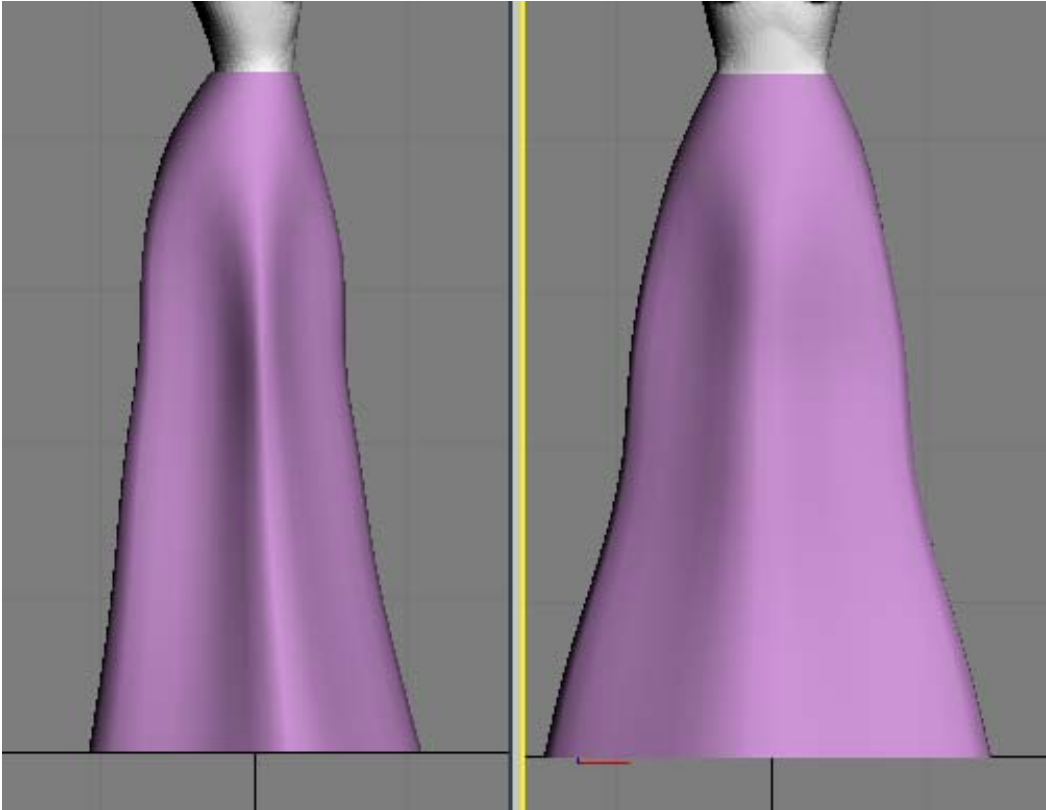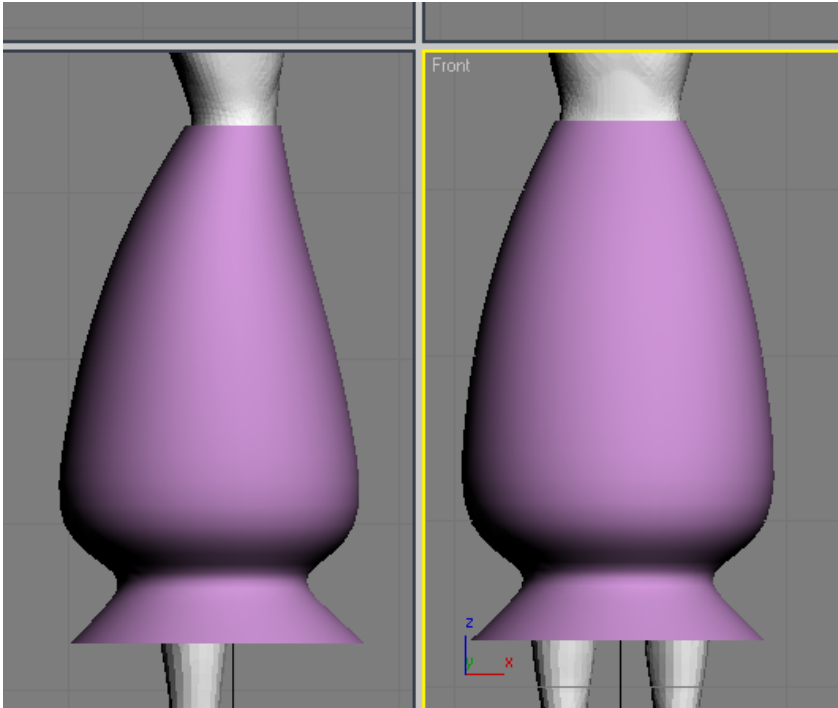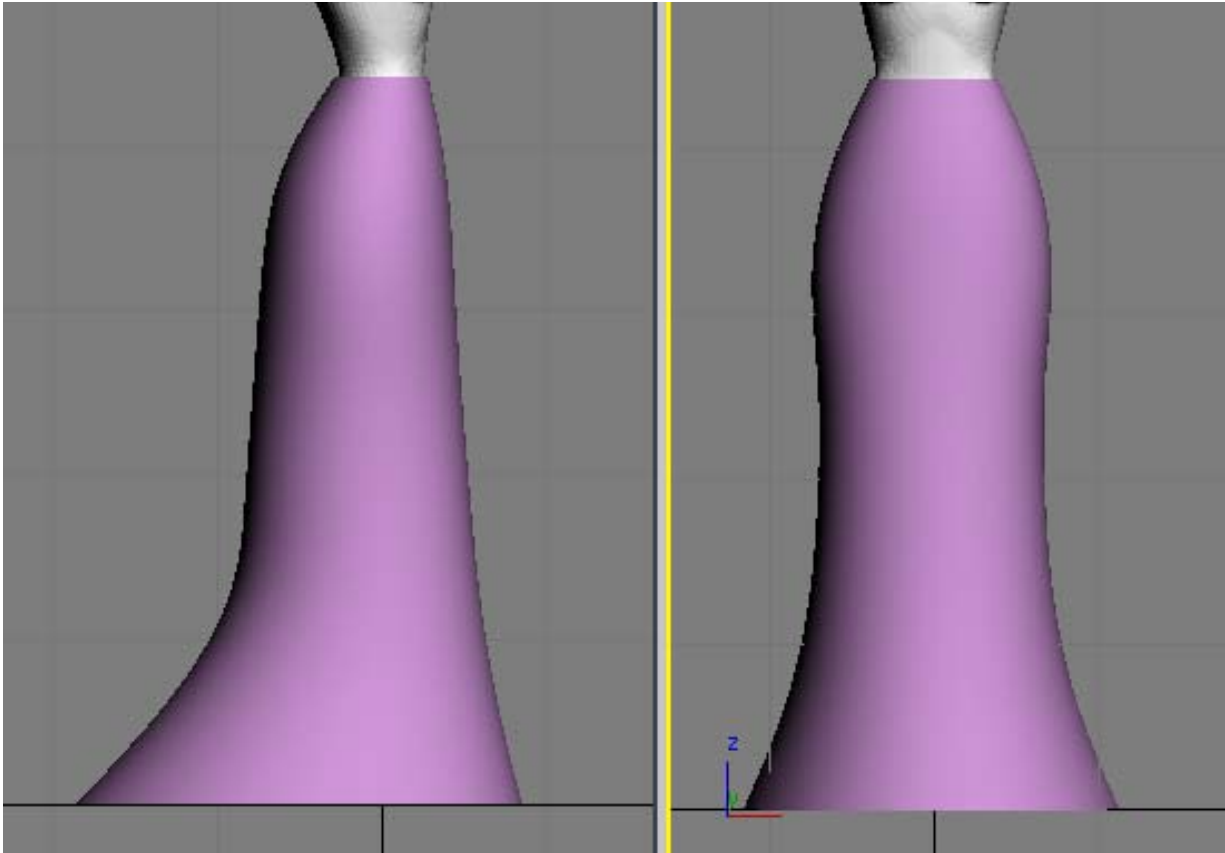
So there, go play around and model yourself up a skirt!