# Making a four poster bed in Carrara
Using:
Vertex modelling
Spline modelling (including Vector Import)

The first 3D model I ever made was of a four poster bed, and it sort of happened by accident. The processes I used were simple, but effective enough to make a decent 3D model, so I feel that this tutorial is suitable for beginners. However, in order to complete this tutorial, you'll need to know how to change the view and navigate around your workspace, how to create and resize objects and move them around, how to assign a material and how to render. If you don't know how to do this already, see the guides in the Tutorials section of my website for how to do these things in Carrara.

First, we're going to make the uprights, and we're going to use Carrara's vertex modeller. We could also use the spline modeller for this, but for this part of the tutorial, we'll stick with the vertex modeller.

Open a new document in Carrara. Select 'Vertex object', from the menu, or select Insert menu > vertex object.
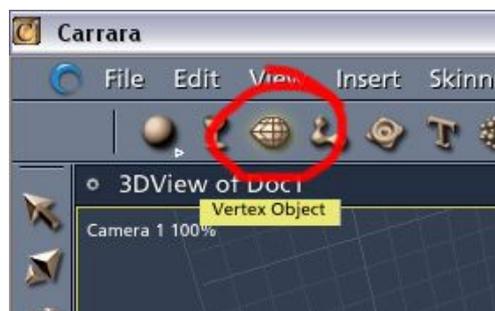
Click anywhere in the workspace to insert a vertex object. Carrara now takes you to the Modelling room.

From the Shape drop down menu on the left, select a cylinder. Click anywhere in your

workspace to add it to your scene. Don't press return yet or click away from your new object.
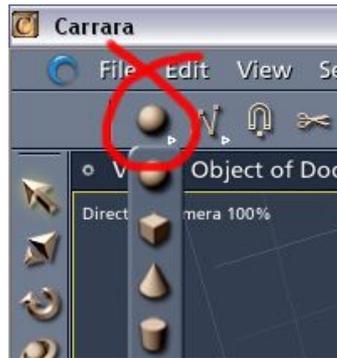

You should now have a cylinder with a set number of edges. You can increase the polygon count of your cylinder now by pressing the "+" or "-" symbols (your cursor will display a '+/–' symbol when this is possible.
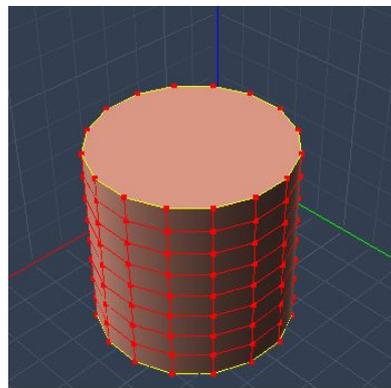

An object with a higher polygon count will generally appear smoother in your final render, but it will also take up more resources.

Since we're going to have 4 of these uprights, and they are going to be a little on the detailed side, we'll go for a medium count by pressing the '+' key a few times. You can see the basic difference in the picture below.
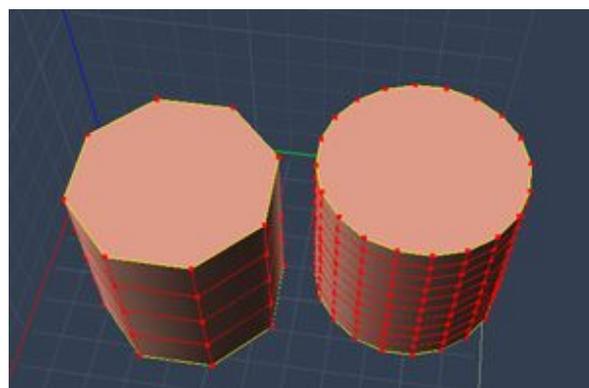

Next, take down the height of the cylinder, as it's going to form the base of the upright. Switch to a side view, and using the selection tool, select the top half of the cylinder.

Press delete. Now switch back to director's camera so you can see what you're doing a little better. Select your entire object by pressing 'CTRL' + A, and now scale the cylinder down vertically using the scale tool on the left.
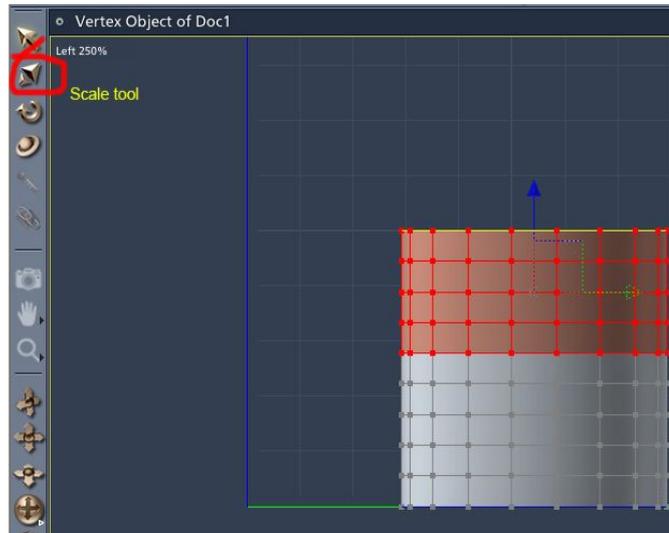

Select one of the edges on the top of your cylinder. If you're having trouble selecting a line instead of a point or a whole polygon, change the selection mode to 'Edge selector'.
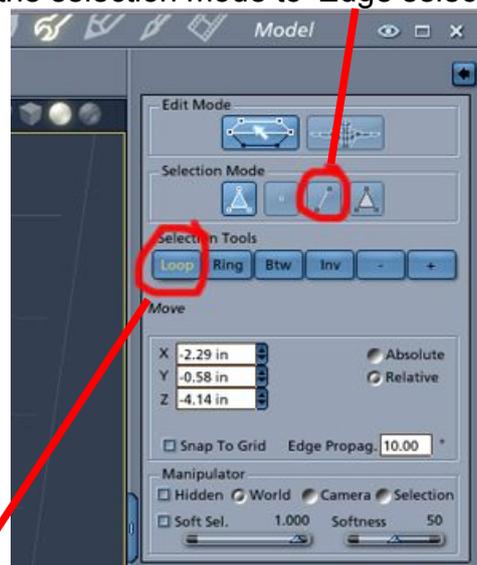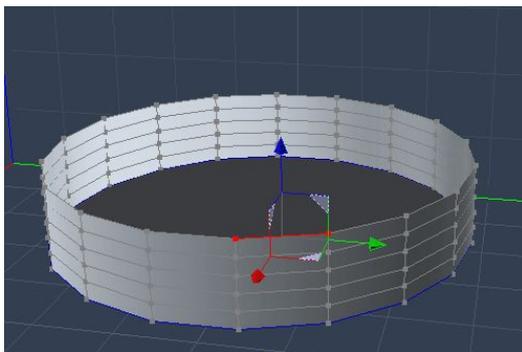

Once you have an edge selected, click 'loop' under the selection tools. This should highlight all the top edges for you. Click on the Construct menu, and select 'Extrude'. You now have a menu on the right that gives you options for which extrusion mode you would like to use. For this model, we'll just use normal extrusion, but fiddle with the other choices and see what your model does.
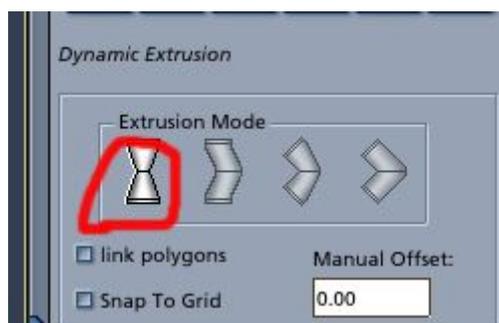
This shape will form the base of the first upright, so the next step is to make a longish base. With the top edges still selected, you need to extrude upwards and inwards. Your cursor should have turned into a set of crosshairs. Click and drag them on the red line to bring those edges in towards the centre, and up a little.
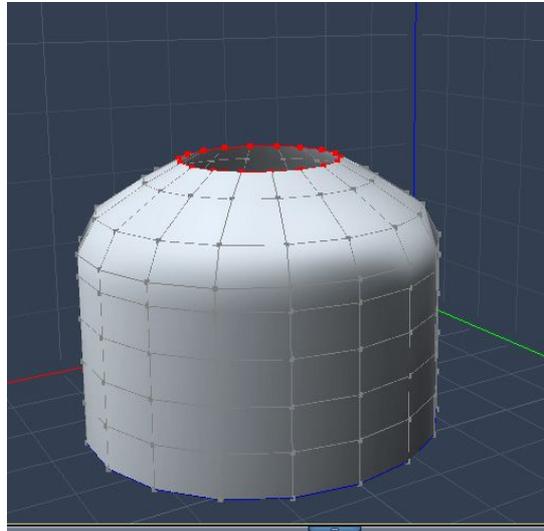
Now you need to bring the ring upwards to form the main upright section of the post. If you want this to go straight up, hold down shift as you drag (if you wanted it to go straight out to the sides at right angles, you'd hold CTRL instead).
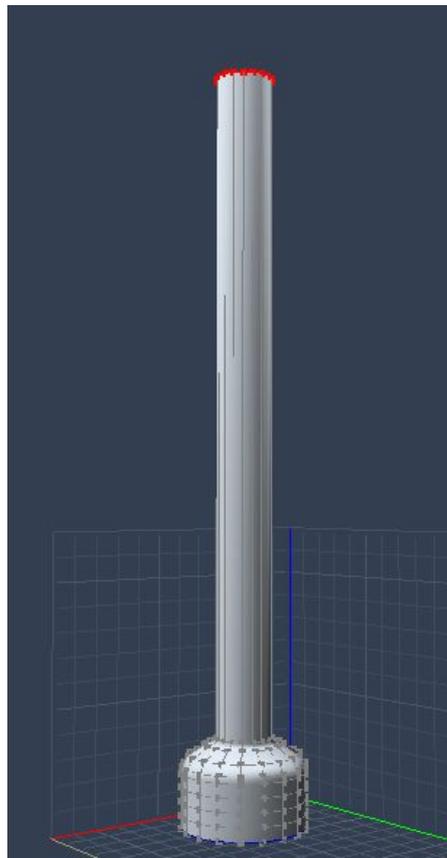
Keep clicking and dragging the line to extrude inwards and outwards until the top of your upright starts to take shape. Change your camera angle and / or switch views whenever you need to. You may need to reselect the line, and the Extrude option when you do this.
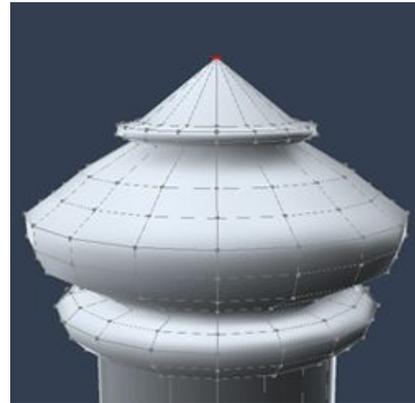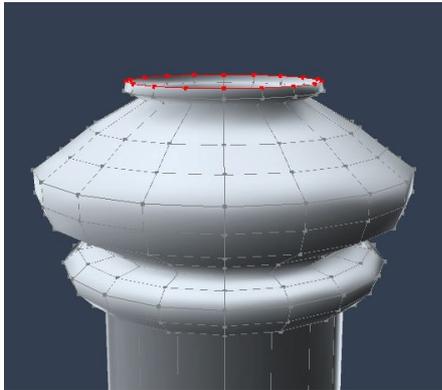

Finally, draw the extruded line together to form a pointed top. If at any point you find you've extruded in the wrong direction, you can press undo, or you can use the move and scale tools to get your line back where you want it.

Right, let's have a look at our model from the side. The shape's almost right, but the base needs to be a little longer in proportion.
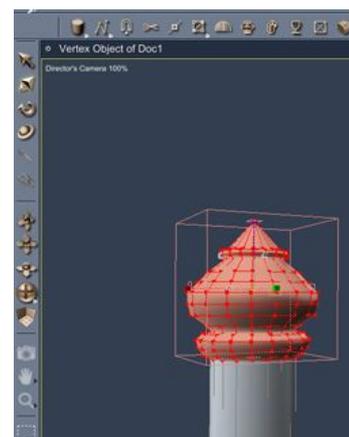
Click and drag to select the base polygons, then use the scale tools to increase its size on the Z (vertical) axis. Do the same with the detailing on the top, if you feel your model needs it.
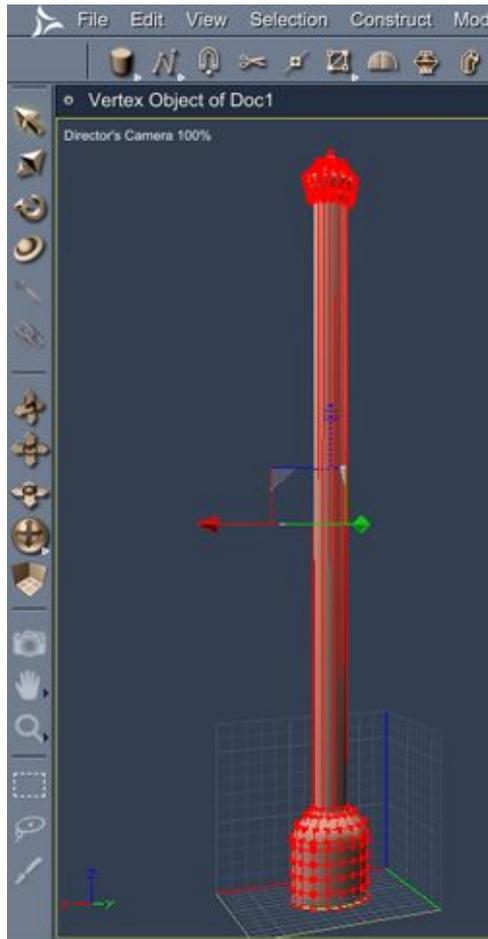
Finally, take a look at your model from the side and decide if your overall proportions look alright. If not, use the method outlined above to scale the different parts until you're satisfied with the overall shape and size. You could also add more detailing on the post if you want a fancier design.

Go back to the assemble room, add a wood texture, and render it to see how it looks.

Now we need to create another 3 of these. First, switch to the top view, then select your upright and press CTRL + D to duplicate it. Drag the new copy out to the right.
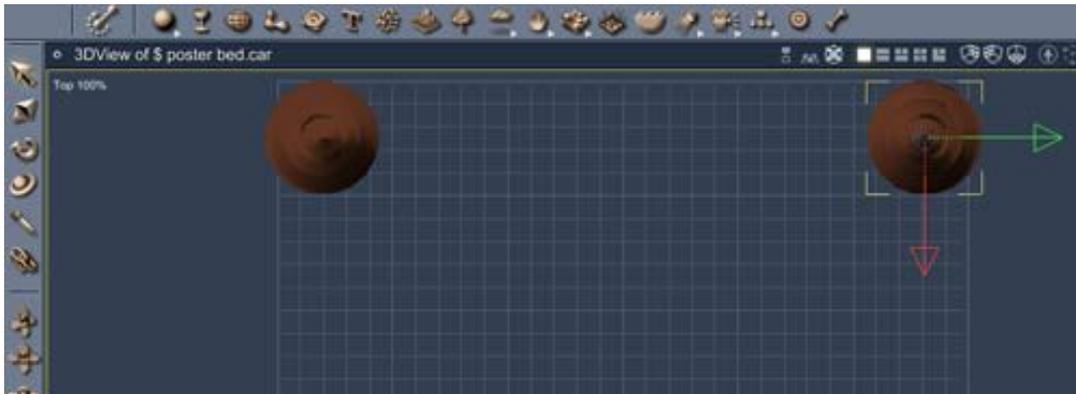
Next, select both uprights, (hold SHIFT + click to select multiple objects) and press CTRL + D again. With the two new duplicates selected, drag them down until they're at a suitable distance to be placed at the outer corners of the bed.
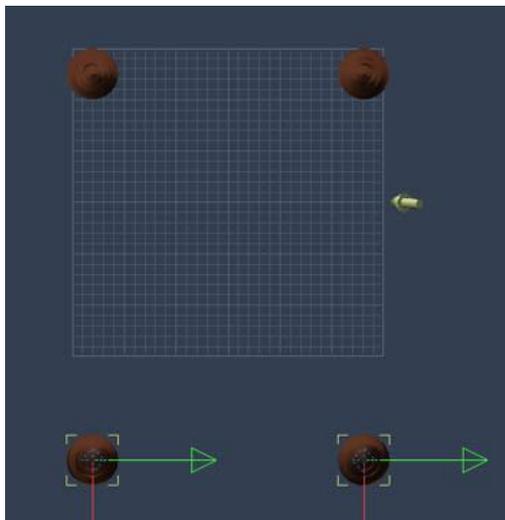
Now we're going to make the body of the bed. Depending on how detailed you want your bed / bedsheets to look, there are several different things you could do. You could use a primitive cube if you're not too bothered about detailing, and add a suitable texture.
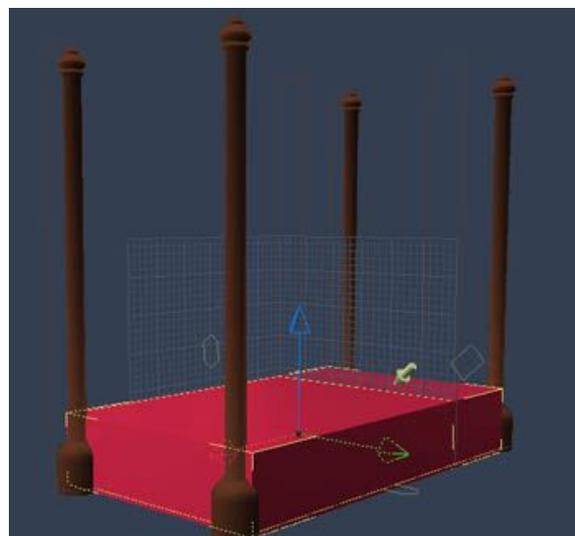
You could also use a vertex object and pull some of the polygons around to look like rippled bedsheets, or you could play with Carrara 6's displacement painting tools to make a rumpled-looking bed.

For this one, we're just going to use a simple spline shape to create a profile with slightly rounded edges. Click the spline object icon on the toolbar, or use the menu Insert > spline object, then click anywhere in your workspace.

Once in the Modelling room, change the view to 'front view'. Now we're going to draw the 'end on' profile of the bed. Click on the pen tool icon, and create a rectangular shape using the grid to guide you, but on the top right and left corners, create a slant. We'll use other tools to curve these edges shortly.


Close the line and finish off the shape by clicking back on your first point. Your shape should then go red as above. Now click on the 'convert point' icon, then select the upper left point of your object.
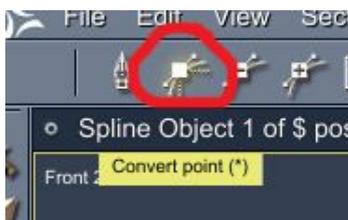

Now hold down the left mouse button, and drag in any direction. You'll see the shape change and become more curved. You may need to experiment with this a little to get it where you want it.

When you have finished shaping the profile to your liking, change back to the director's camera view.
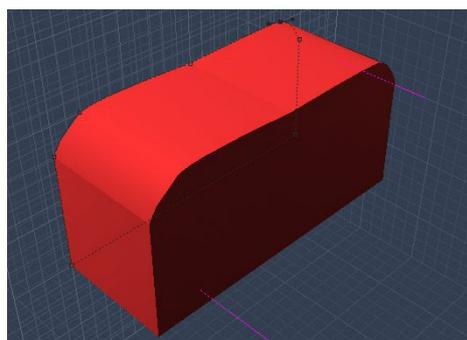
If you're happy with the shape, change now to the left view. The purple line you can see is the object's side on profile. We're going to lengthen this so it's more in proportion for a bed base.
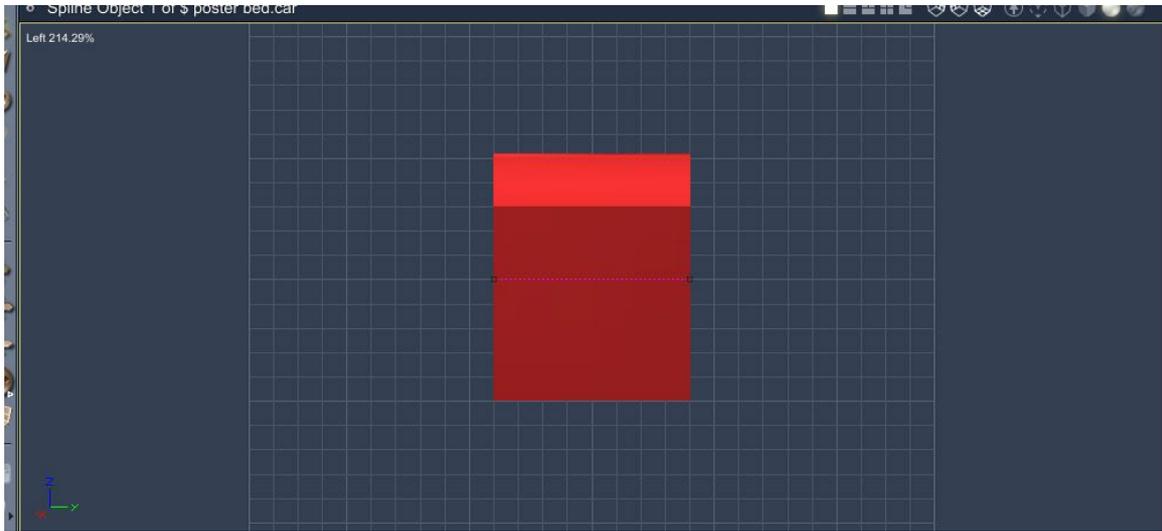
Click and drag any point on the line to extend the shape. To keep the profile line straight, hold down Shift as you drag the points. Now go back to the Assembly room and put the bed base in between the posts. You'll probably need to resize it and possibly move the posts around to get them in the right places. Add a suitable texture.

Now for a headboard. Again, we're going to use the spline modelling room for this, but we're going to use an imported vector. You could equally draw a shape using the methods described in the previous step if you don't have a drawing programme capable of handling vectors (e.g. Adobe Illustrator).
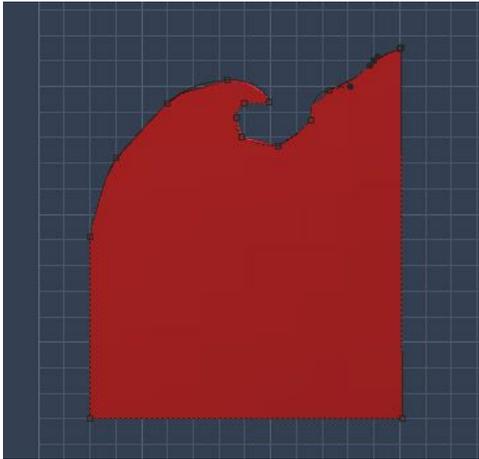
If you don't have Illustrator (or comparable programme), you can just draw the shape in the spline modelling room. This was drawn with points in the spline modeller, using the pen tool and convert point tools covered earlier.

Back in the Assemble room, it can be duplicated with symmetry on the Z axis, and the two halves grouped together form the headboard.

In Adobe illustrator (or another similar programme), you can use the drawing tools to create vector shapes. The instructions below are for Illustrator, as that what's been used.

Either use the pen tool to draw a shape, or as I have done here, use a premade symbol.
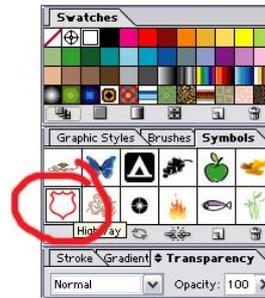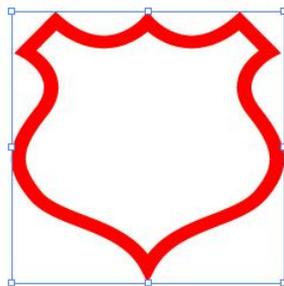

Now you need to export your shape. Go to File>Export and ensure the file type is set to *.ai, click OK, and on the next screen, change the Version to Illustrator 8, as Carrara does not currently support anything later. Click OK, and say yes to the warning message.

Go back to the spline modelling room in Carrara, change to front view, click File > Import and select the file you just saved.
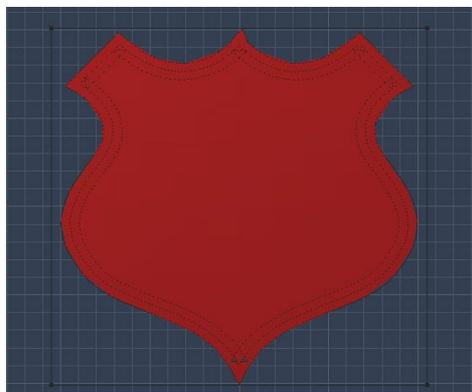

Go back to the assemble room, flip or rotate the shape so that the point is facing up. Scale the shape to size and add a suitable wood texture.

Now we'll add a cover around the top, which would act to cover the curtain fixings if it were real. I've used 4 primitive cubes, scaled to fit for this, with the same wood texture as used for the uprights. Render your bed to see how it looks so far.
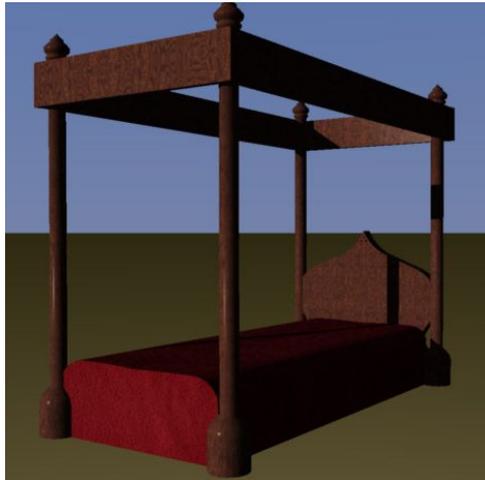

Now for some curtains. We're going to use a plane with one of Carrara's modifiers for this. Insert a plane, and add a modifier from the modifier tab on the right. I've used the Waves> wave modifier on the Z axis. The settings in the screenshot below on the left produced a plane with the effect shown below on the right.
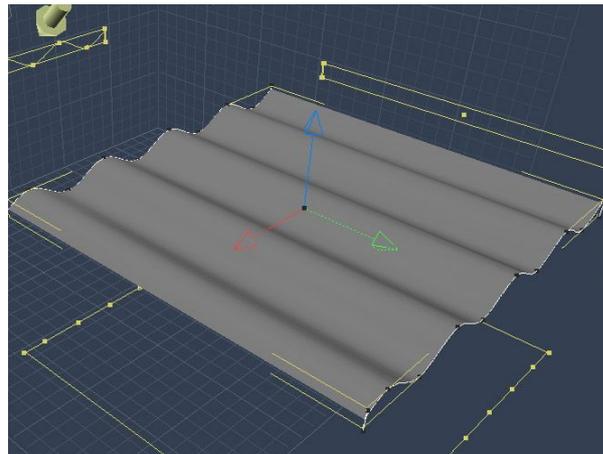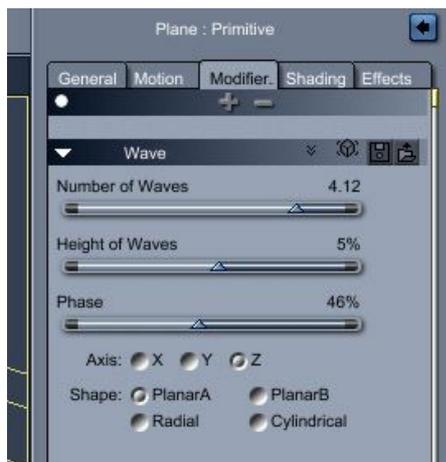
Duplicate and resize the curtains and place them around the bed. Add a transparent texture for gauzy curtains, or go for something more velvety, whatever suits you.

For the pillows, insert a vertex sphere, and change the scale and proportions until you have something pillow-shaped. Selecting individual polygons and pushing them up and down will give them a more 'used' look.
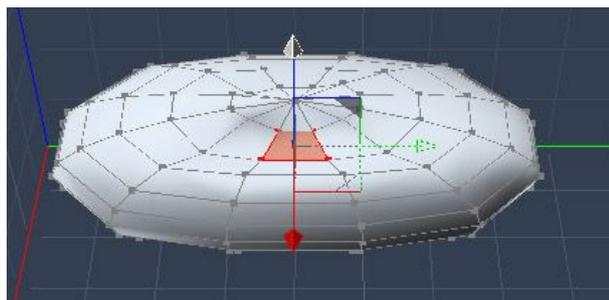
Go back to the assemble room and and add a suitable texture, and if you feel your pillow (or any of the other objects) need to be smoother, go to Edit> smooth objects, and increase the subdivision level to 1.

Duplicate the pillow and arrange on the bed, then pop your bed in a scene and render it to see how it looks.

If you've any questions about this tutorial, or want to leave feedback, please email me on the link below.

Deedee
October 07

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