

Sphere Model 1

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Created: October 20, 2009

Last updated: October 21, 2009

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Instructions

PLEASE NOTE! The author has tried to ensure that the following plans are correct, but as of October 20, 2009, he has not tested them yet himself. As mentioned above, this material is distributed **without a warranty**. I recommend that users check it themselves before investing a lot of time and effort into cutting out the paper model.

Any corrections will be gratefully received by the author. Contact information can be found on the title page.

These plans represent a "development" of a sphere: The individual figures are "flattened-out" spherical biangles corresponding to 1/8 of a sphere.

To use these plans, tape or otherwise attach them to a sheet of fairly heavy paper; I recommend watercolor paper. Bristol board or cardboard cannot be used for this model, because the pieces need to be able to bend.

First, prick out the holes for the stitches and then use a cutting knife to cut out the *outer* lines of the plan. **Please note:** The *inner* lines are only for reference and should not be scored!

The knife must be sharp as watercolor paper (or other heavy papers) will dull the blade quickly. I have been using knives with disposable blades. I've been meaning to try sharpening them but haven't done so yet. I therefore can't say whether this will work. It seems a shame to waste so many blades, which is why I have a jar full of them. They must be good for something.

It will be necessary to retape as bits of the plan are cut out.

Make sure that the plan is taped down smoothly or you will introduce inaccuracies. *Do not untape it or let it slip until you are done!* You will never get it back where it's supposed to go. However, with this model, this is only important for an individual piece, since they aren't attached to each other.

Use removable tape. Ordinary masking tape will damage the paper when it is removed. Be aware that "removable tape" isn't completely reliable, especially if left too long on the drawing. Sometimes it's possible to reuse pieces of it, which avoids wasting large amounts of it.

Each figure contains 5 curves: From left-to-right: 1. the left edge of the spherical biangle, 2. an inner curve for stitches, 3. the right edge of the spherical biangle, 4., an outer curve for stitches, 5. a curve that's even further out to provide an offset so that holes can be punched for the stitches in curve number four.

Once they are punched and cut out, two pieces A and B should be joined so that the outer curve for stitches on A (4) should be placed over the inner curve for stitches on B (2). Then, curve 4 of B should be placed over curve 2 of a third piece, C, and so forth. As the sphere closes, it will probably be necessary to pre-thread the holes in such a way that the threads can be pulled tight without having to reach inside the (partial) sphere. However, it may be possible to use a curved needle, such as an upholsterer's needle. I haven't gotten to the point of trying to put the model together yet myself.

