Curved Folding

General instructions for curved folding in paper

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You can build one of the fundamental models, the wave, to practice curved folding of paper surfaces. The instructions for scoring, cutting and folding can be applied for most shapes and models.

The template for the model can be found on the last page of this guide. You can print it on A4 card. We used Bristol Board, 250 gsm, extra smooth surface.

1. Scoring

Scoring is a process of indenting or lightly cutting a line on the paper to define a weak point, this makes the fold precise. It is easiest to score the model before you cut it out of the page.

- There are two ways of scoring fold lines. You can use a ball-point pen to score all lines of the template. The pen will indent the score lines through to the underside of the paper.

  Alternatively you can use a blunt craft knife to lightly cut the red lines (Mountain folds). The depth of the cut may need some experimentation. The blue lines (Valley folds) are scored with a ball-point pen. This makes the fold lines visible on the underside of the paper.

- In this example we use a ball-point pen for scoring along the red and blue lines. Do this very slowly, as the more accurately you follow the curves the better; the model will fold easily and have smoother surfaces.
2. Cutting

• Cut the entire model out along the perimeter line after scoring. Use a craft knife on a cutting matt for curved edges and metal ruler for the straight edges, or use scissors.

3. Folding

There are two different folds, Mountain and Valley folds. A Mountain fold is represented by a red line and folded downwards from the pattern on the surface. A blue line signifies a Valley fold, so needs to be folded upwards.

• We will start with a Mountain fold. Make sure the printed template is facing upwards. Start with folding the first outer red line downwards to create a Mountain fold. Work your way along the whole length of the scored line.

• For the next fold, which is a Valley fold, it is easier to turn the paper over and fold it in the same way as a Mountain fold.
4. Finished curved folded model

- Fold all score lines one after another, alternating between Mountain and Valley folds. Turn the paper over between each fold.

- If folds are not smooth, they can be repaired by stroking them with the back of a craft knife or with your fingernail. Pushing the fold while stroking upwards to the edge and along its length will allow you to align any folds that don't look right.

- Push the folds together to increase the curvature and flexibility of the shape. Work your way from one end to the other.

- By folding this model you have learned the basic techniques of scoring, cutting and folding curved lines in paper.
5. Experimenting with the wave pattern

You can now experiment with the wave model, extending or twisting it or building shapes. Multiple sections can be glued together in length and height. A double wave can for example be twisted into an organic shape or joined into a circle. To achieve this you need to increase the flexibility of the folds. Squash the curved sections repeatedly together and use your fingernail to stroke along the top of the fold lines. This will allow for the curve to become tighter without crumpling.

When you have your desired form, fix it either by gluing the ends together or by taping, pinning, stapling or glueing open ends to a surface or object. If you don't fix the form, it will straighten up again and lose its tension when you let go of a shape.

Here are some examples of what we have made. You can add your model to the Curved Folding photo page: [http://www.curvedfolding.com/photo](http://www.curvedfolding.com/photo)

Extending multiple sections in length and height
Twisting joined sections
Building circles
Template for the wave model. Print on A4 card for example Bristol Board, 250 gsm, extra smooth surface. The dashed line is marking the flap for glueing multiple templates together.