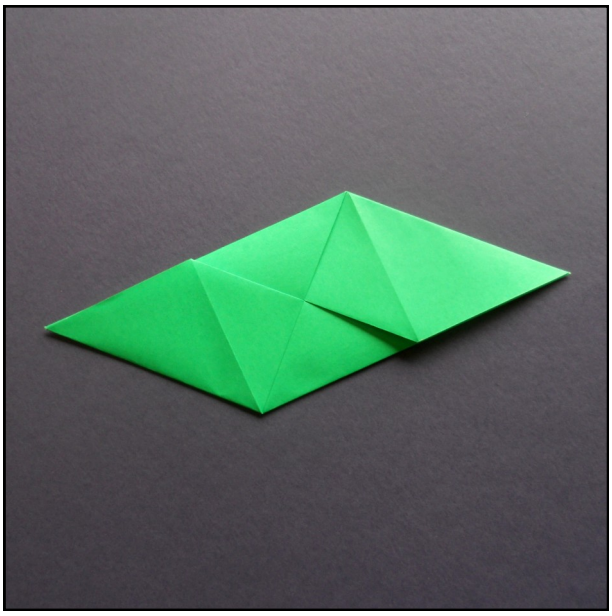
The Darwin module

Designed by David Mitchell



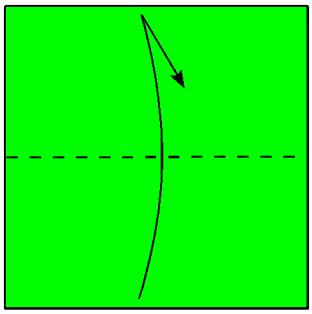
In its most basic form the Darwin module is identical in appearance to the Sonobe module and can be configured to create many of the same forms, though not always as successfully.

However, this basic form has four hidden triangular flaps which can be brought into view and folded independently of each other to create contrast patterns. The Darwin module can thus act as a base from which many decorative forms can be evolved.

I designed and first published the Darwin module and many of its decorative variants in 2001.

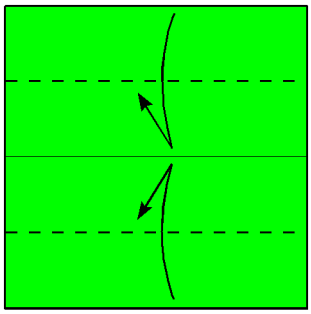
The Darwin module is folded from a square which is first divided into a 3x3 grid. You will need another square of the same size to use as a template to help you achieve this division.

1



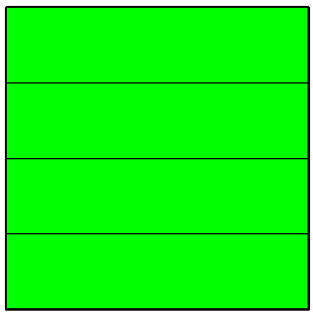
1. Fold the template in half upwards, crease, then unfold.

2



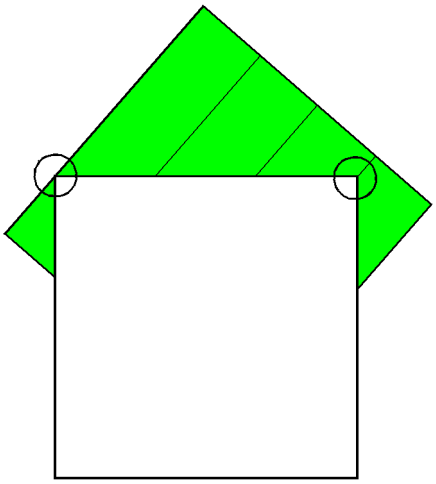
2. Fold both the top and bottom edges to the middle, crease, then unfold.

3



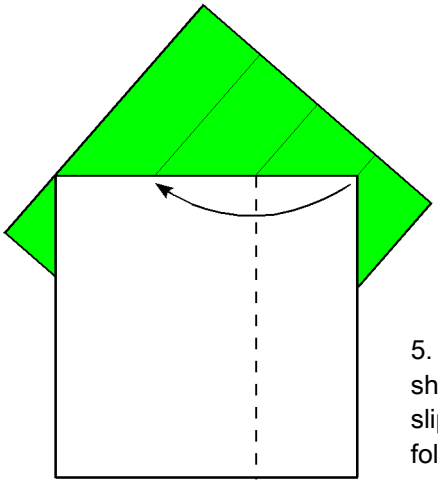
3. The template is finished.

4



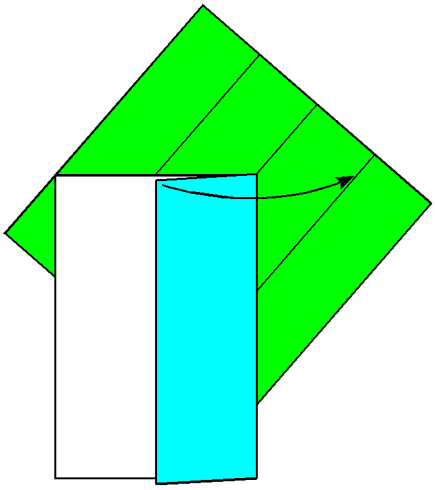
4. Begin by laying your square on top of the template like this, making sure the corners are aligned to the edge of the template and the crease in the way marked with circles here.

5



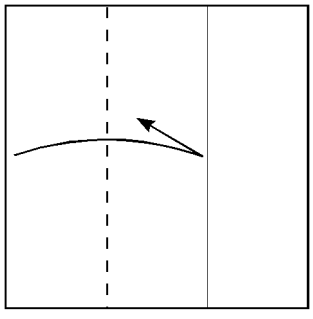
5. Fold the right hand corner inwards as shown. Make sure the two squares don't slip out of alignment as you make this fold.

6



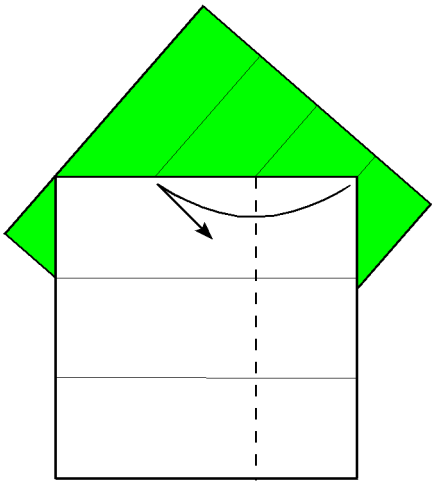
6. Open out the fold made in step 5 and remove the square from the template.

7



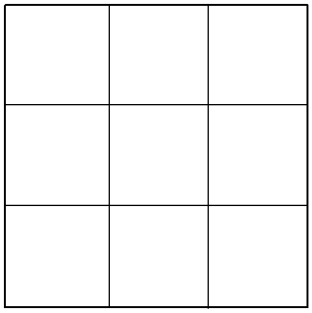
7. Fold the left hand edge onto the crease made in step 5, crease, then unfold.

8



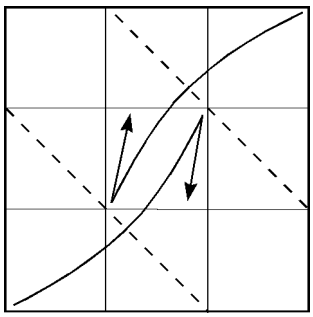
8. Your paper is now divided into thirds. To divide the paper into thirds in the other direction as well, rotate the paper through ninety degrees and repeat steps 4 through 7.

9



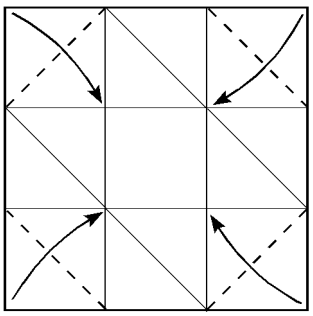
9. This is the result. The paper is now divided into a 3x3 grid of smaller squares.

10



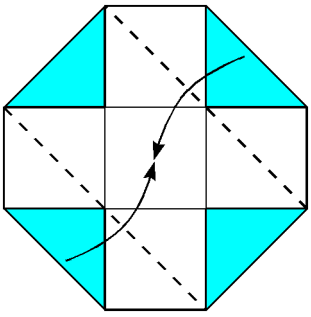
10. Fold the top right and bottom left corners inwards like this, then unfold.

11



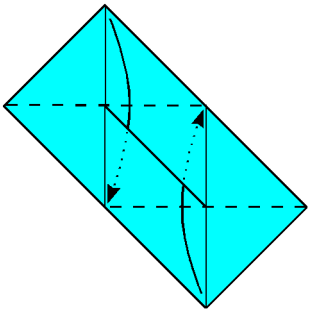
11. Fold all four corners inwards like this.

12



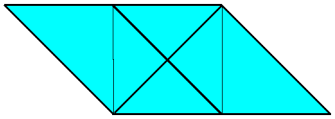
12. Fold the top right and bottom left edges inwards using the existing creases.

13



13. Fold the top and bottom corners inwards making sure they tuck underneath the central layers.

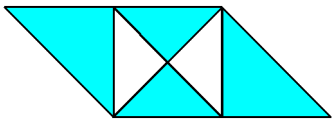
14



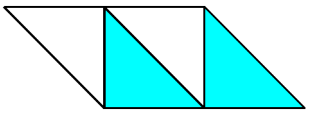
14. The basic Darwin module is finished. You will need to add configuring folds in order to make cubes or silverhedra using this module.

Decorative variations

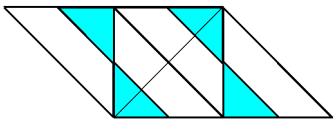
There are separate diagrams on this site showing how to make many decorative variations of the Darwin module, including:



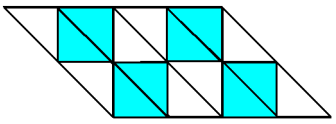
Diablo pattern



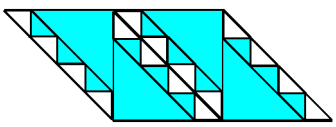
Yin Yang pattern



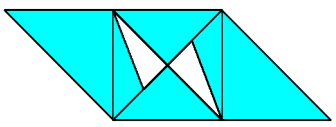
Windmill pattern



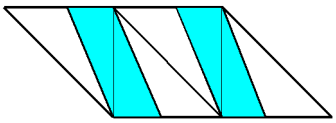
Chequerboard pattern



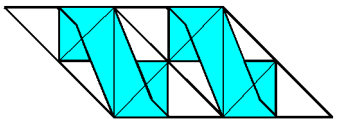
Dogtooth pattern



Flash pattern



Four Flash pattern



Lightning pattern

All these decorative variations can be used to make the all the same cubes, cube combinations and silverhedra as the basic module.

Because the four triangular flaps can be folded independently it is also possible to make cubes, cube combinations and silverhedra in which several, or many, decorative motifs are combined within the same design.

The possibilities are probably endless.