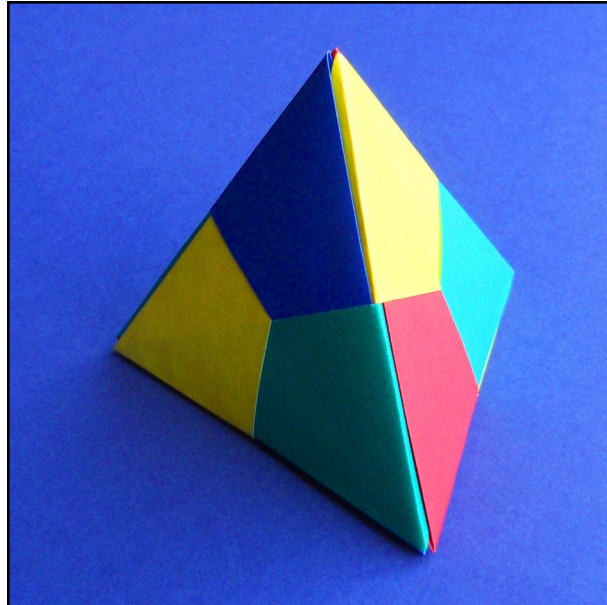


Reptile Modules

Designed by David Mitchell

Reptile modules are very simple modules, folded from squares, that will go together to create kite-pattern deltahedra, that is, polyhedra whose faces are equilateral triangles.

Each triangular face is made from three Reptile modules. These faces can then be linked together using the spare tabs and pockets of the three module assembly.

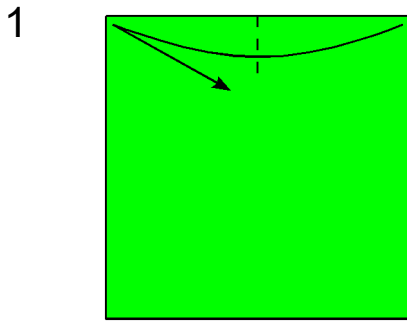


The advantage of Reptile modules over Terada and Abe modules, which can also be used to create kite-pattern deltahedra designs, is that, when Reptile modules are used, all the regions of colour on each face are independent of each other and also of those on other faces. This allows for a much greater number of pattern possibilities. The corresponding disadvantage of using Reptile modules is that the edges of the designs are less strong, particularly when large numbers of modules are used, and that the corners do not hold together quite so well.

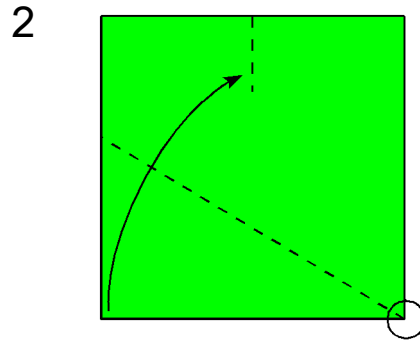
These diagrams show you how to make a kite-pattern tetrahedron using three Reptile modules in each of four contrasting but complementary colours arranged in such a way that the colours on each of the four faces are different. Other deltahedra can be made in a similar way.

I created Reptile modules in 1997.

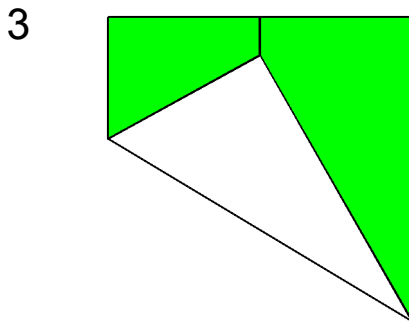
If you are using irogami begin with your paper arranged coloured side up.



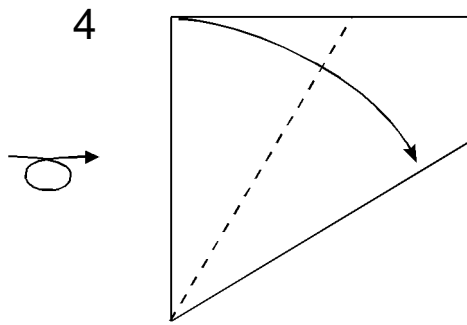
1. Fold in half sideways, crease just the top part of the paper, then unfold.



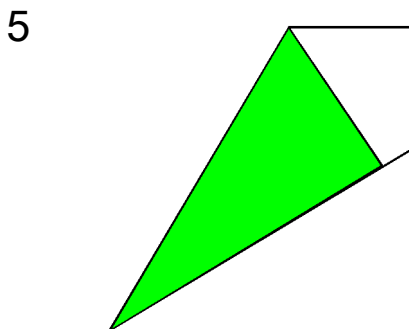
2. Fold the bottom left corner onto the crease made in step 1 making sure that the crease begins from the bottom left corner.



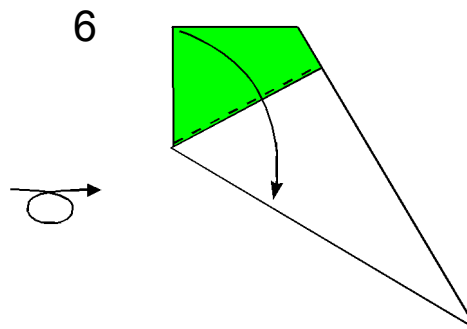
3. Check that the point of the bottom left corner is sharp. Turn over sideways.



4. Fold the left edge onto the sloping edge.

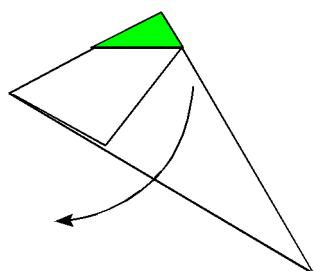


5. Turn over sideways.



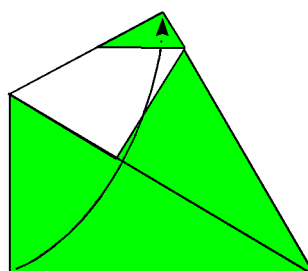
6. Fold the top edge diagonally inwards along the line of the sloping top edge of the front layer.

7



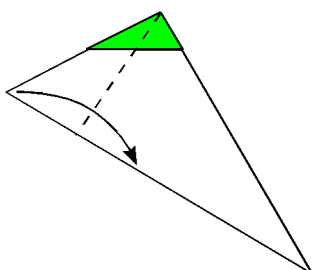
7. Open out the fold made in step 2.

8



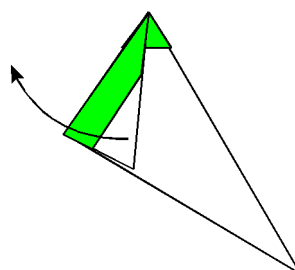
8. Remake the fold made in step 2 but tuck the bottom left corner into the pocket as shown.

9



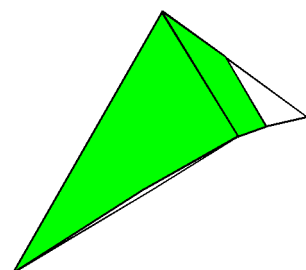
9. Fold the left corner inwards so that the crease starts from the top corner and meets the sloping bottom edge at right angles.

10



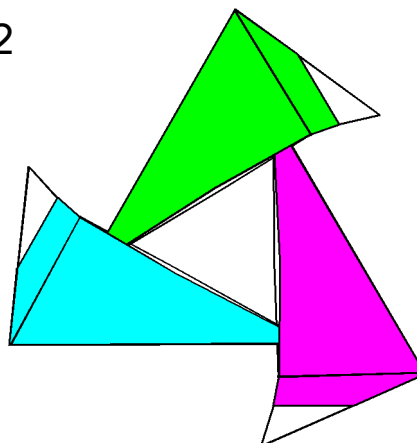
10. Undo the fold made in step 9 and turn over sideways.

11



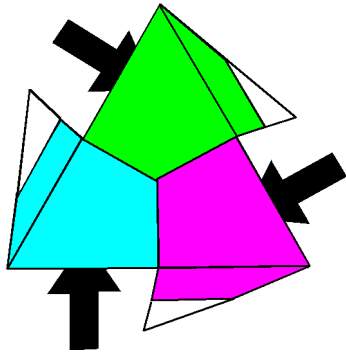
11. The first module is finished. Make three in each of four contrasting but complementary colours.

12



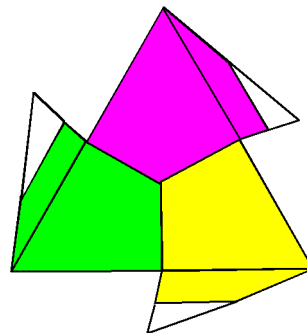
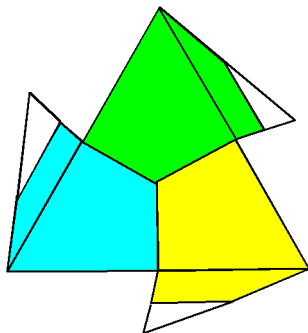
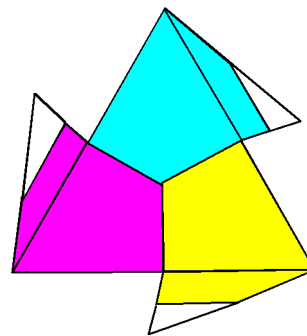
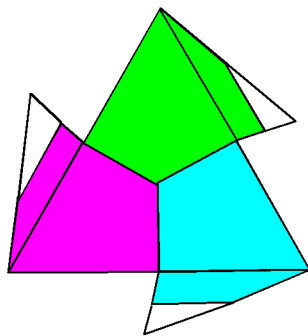
12. Three modules go together to form one triangular face like this.

13



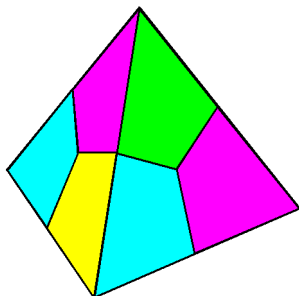
13. Faces can be linked together using the tabs and pockets provided.

14



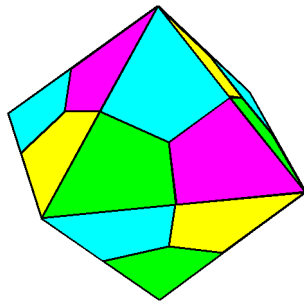
14. The four faces you need to make a tetrahedron will look like this ...

15



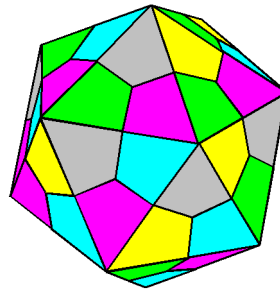
15. ... and the finished tetrahedron like this.

16



15. Eight faces could be put together to make an octahedron ...

17



17. and twenty to make an icosahedron. Many other deltahedral designs are possible.

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