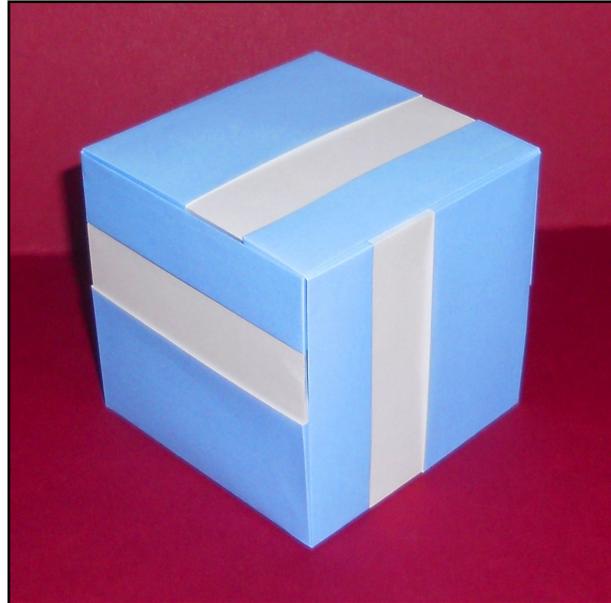


Off-Centre Stripe Cube

Designed by David Mitchell

The Off-Centre Stripe Cube is a simple variation of the Paul Jackson Cube.

Because the stripe is in an off-centre position each module can be added to the cube in two different orientations. This allows the creation of a number of cubes of differing patterns. The obvious challenge is to try to discover how many such differently patterned cubes are possible.

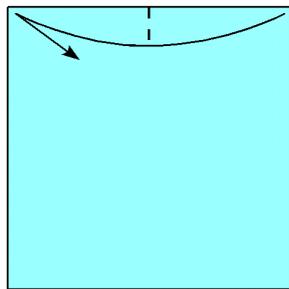


You will need six squares of irogami, paper which is white on one side and coloured on the other. Most origami paper sold in multi-colour packs is of this type.

The Off-Centre Stripe Cube was designed in 2001.

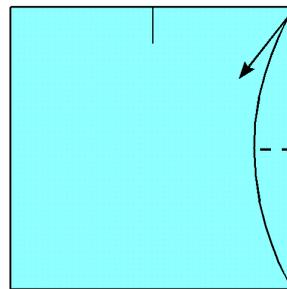
Folding the modules

1



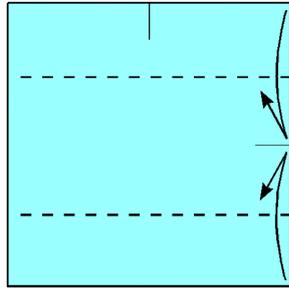
1. Make a tiny crease to mark the centre of the top edge.

2



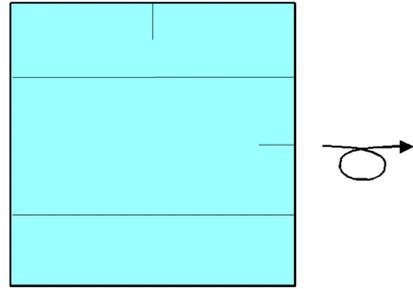
2. Make another tiny crease to mark the centre of the right edge.

3



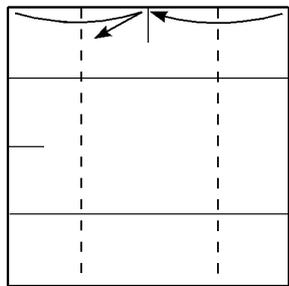
3. Fold the top and bottom edges into the centre, then unfold.

4



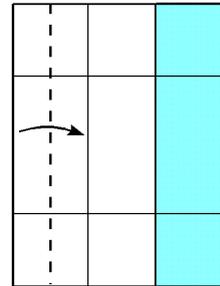
4. Turn over sideways.

5



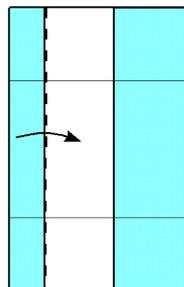
5. Fold the right edge into the centre. Fold the left edge into the centre, then unfold.

6



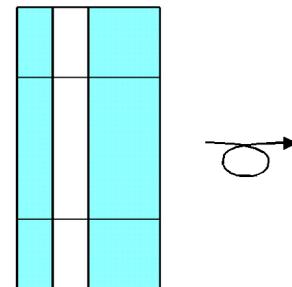
6. Fold the left edge inwards to lie along the crease made in step 4.

7



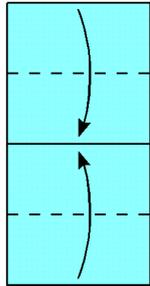
7. Fold the left edge inwards again using the existing crease.

8



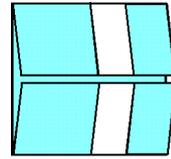
8. Turn over sideways.

9



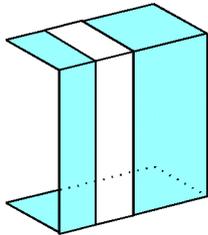
9. Fold the top and bottom edges inwards using the existing creases.

10



10. Open the arms of the module up at right angles and rotate so that your module looks like picture 10.

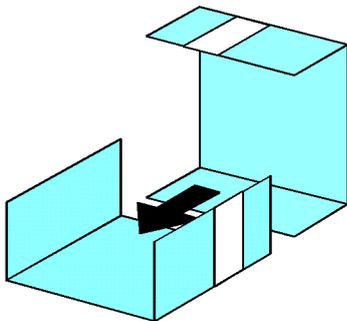
11



11. The first module is finished. Make all six.

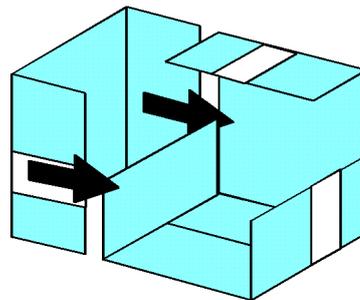
Putting the modules together

12

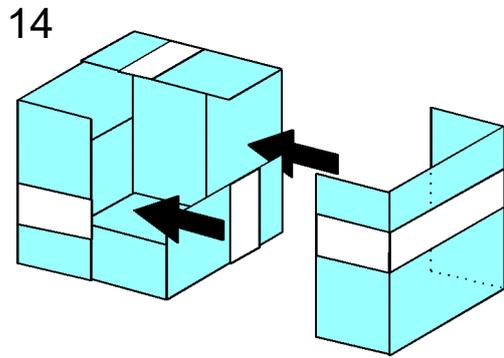


12. Insert the arm of one module inside another modules like this.

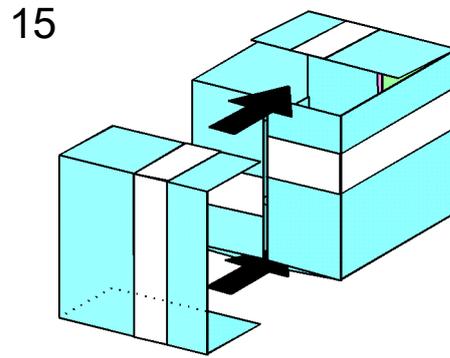
13



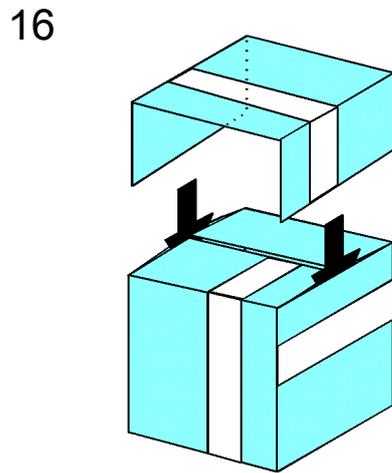
13. Add a third module in a similar way.



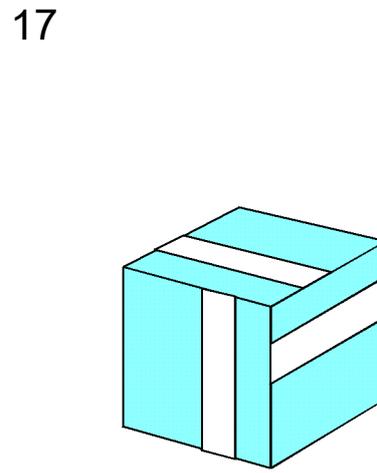
14. Add a fourth like this.



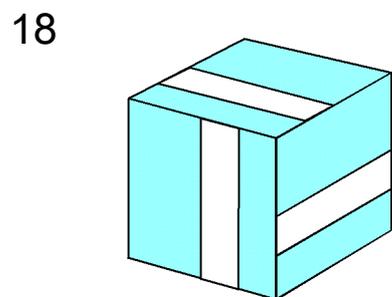
15. And a fifth like this.



16. Add the sixth module like this to complete the cube. Push all the corners gently together so that the modules lock together firmly.



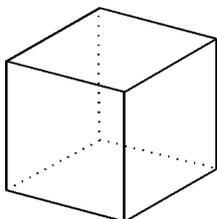
17. The finished Off-Centre Stripe Cube should look like this. You can create differently patterned cubes by rotating one or more modules through 180 degrees ...



18. ... like this

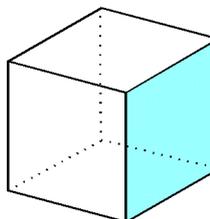
Varying the pattern on the faces

19



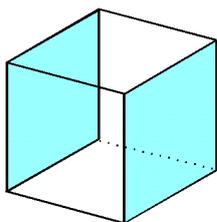
19. There are five ways to rotate one or more modules in this way. This is the original cube. It can have any pattern on its faces.

20



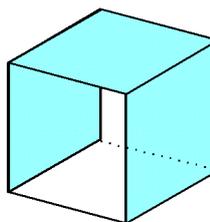
20. You can create a different pattern by rotating just a single face.

21



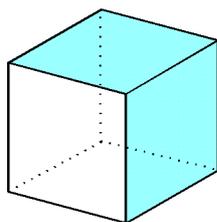
21. Or two opposite faces.

22



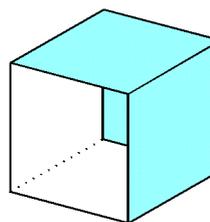
22. Or three faces in a line.

23



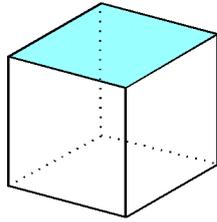
23. Or two adjacent faces.

24



24. Or three faces around a corner.

25



25. Doing all the above in turn will produce six patterned cubes, the one you started with and five more. I leave you with two questions ...

Are all these six cubes really different from each other?

If so, or even if not, does this methodology find all the differently patterned cubes that can be created using these modules? Or are there more still to find?

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