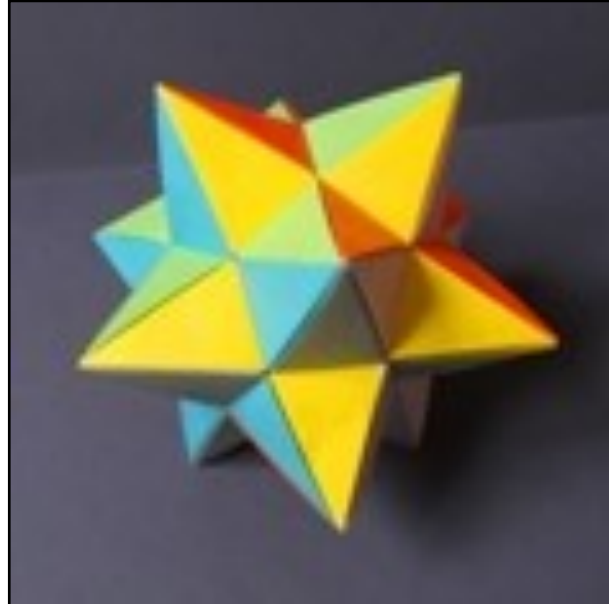


# 60-part Small Stellated Dodecahedron

Designed by David Mitchell

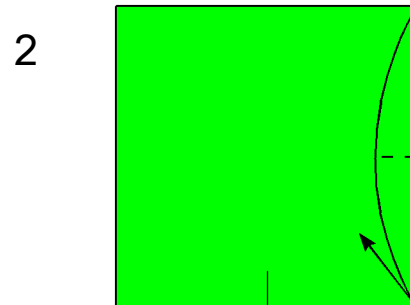
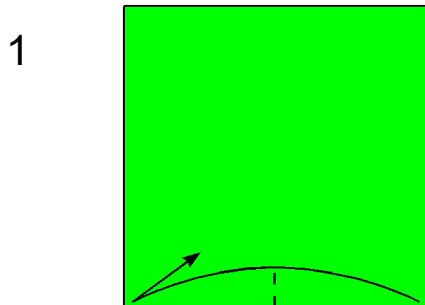
This version of the Small Stellated Dodecahedron was designed to allow each of the arms of the twelve pentagrams visible on the surface of the form to be made from a separate sheet of paper. As far as I know, earlier modular solutions for this form do not allow this.



All modular versions of this form that I have seen, including this one, suffer from the same defect, that the vertexes where the corners of three pyramids meet are relatively weak in comparison to the rest of the structure. While this design will look good sitting on a flat surface it is not sufficiently robust to withstand rough handling.

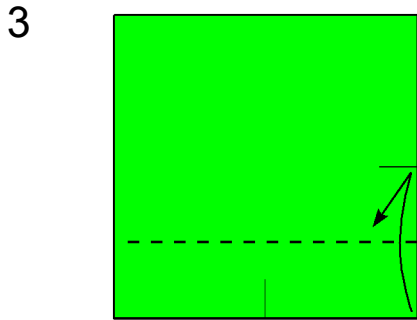
The module was designed in 2016.

You will need sixty squares of paper, ten in each of six colours. Any kind of paper can be used.

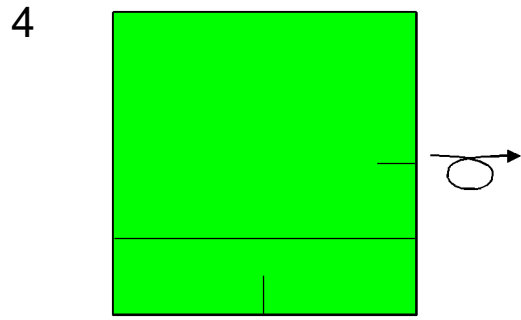


1. Make a tiny crease to mark the centre of the bottom edge.

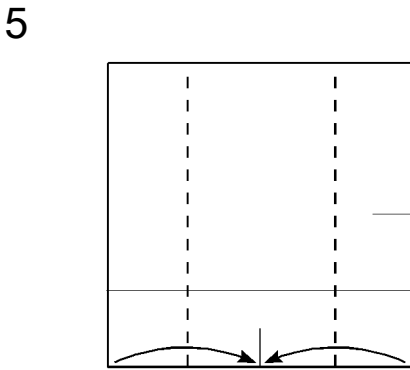
2. Make another tiny crease to mark the centre of the right edge.



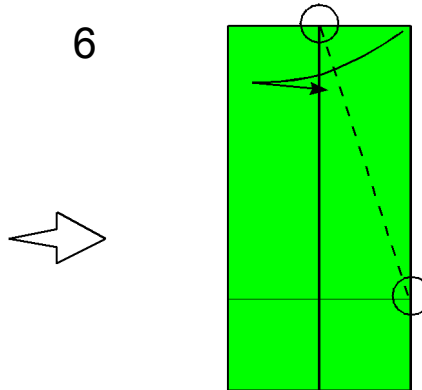
3. Fold the bottom edge upwards, using the tiny crease made in step 2 to locate the fold.



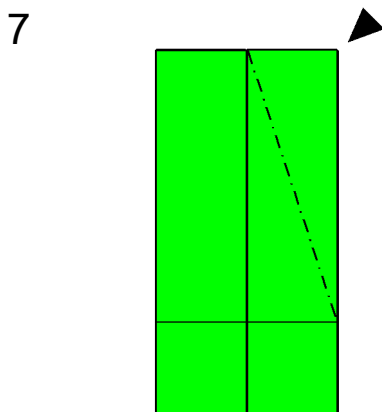
4. Turn over sideways.



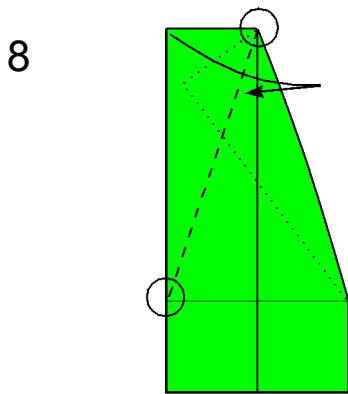
5. Fold both outside edges into the centre, using the tiny crease made in step 1 to locate the fold.



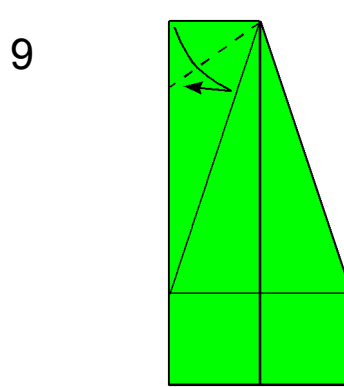
6. Fold the top right corner inwards making sure the crease begins and ends at the points marked with circles, then unfold.



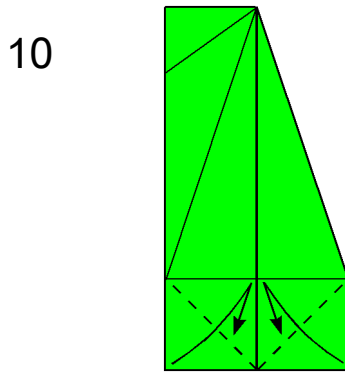
7. Turn the top right corner inside out in between the other layers.



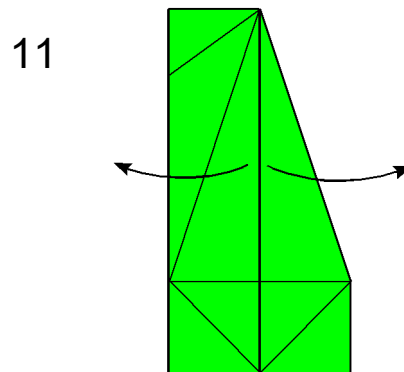
8. Fold the top left corner inwards in a similar way, then unfold.



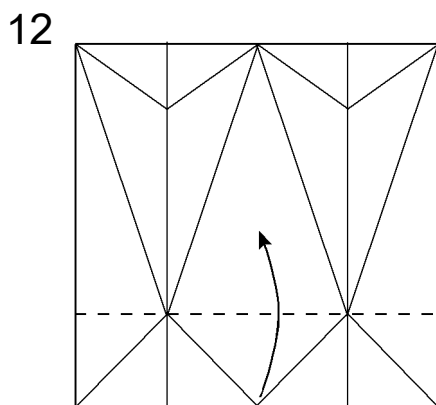
9. Fold the top edge onto the crease made in step 8 then unfold.



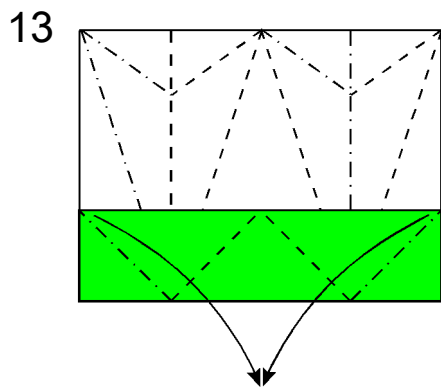
10. Fold both the bottom corners inwards as shown, then unfold.



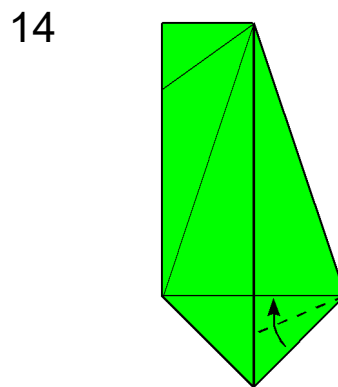
11. Open out completely.



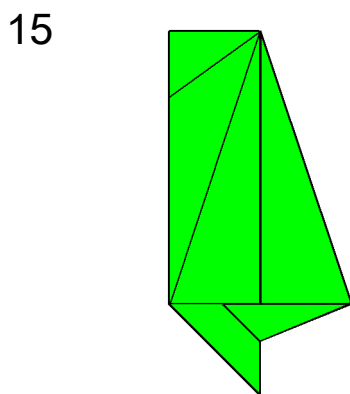
12. Fold the bottom edge upwards using the existing crease.



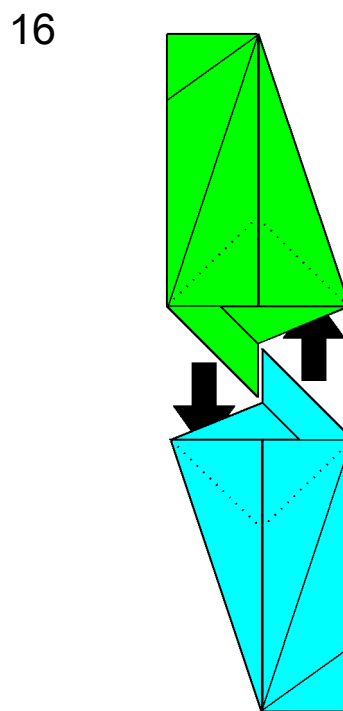
13. Fold both top corners of the front layer diagonally downwards as shown and refold the top of the module.



14. Fold the lower right point upwards as shown. Picture 15 shows what the result should look like.

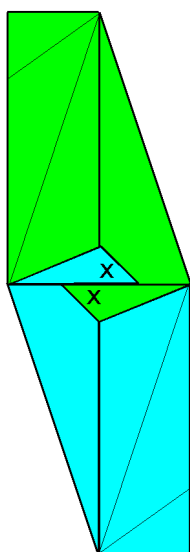


15. The first module is finished. Make All sixty.



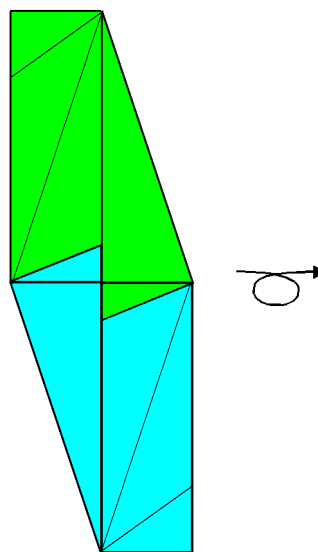
16. The modules fit together in pairs like this.

17



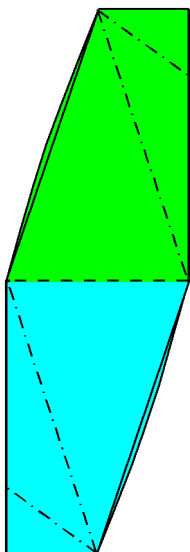
17. To lock the modules together tuck both front flaps, marked with xs, into the pockets immediately behind them.

18



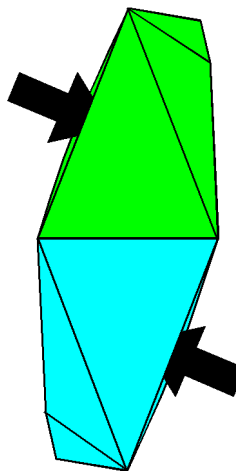
18. The two modules are now locked together. Turn over sideways

19

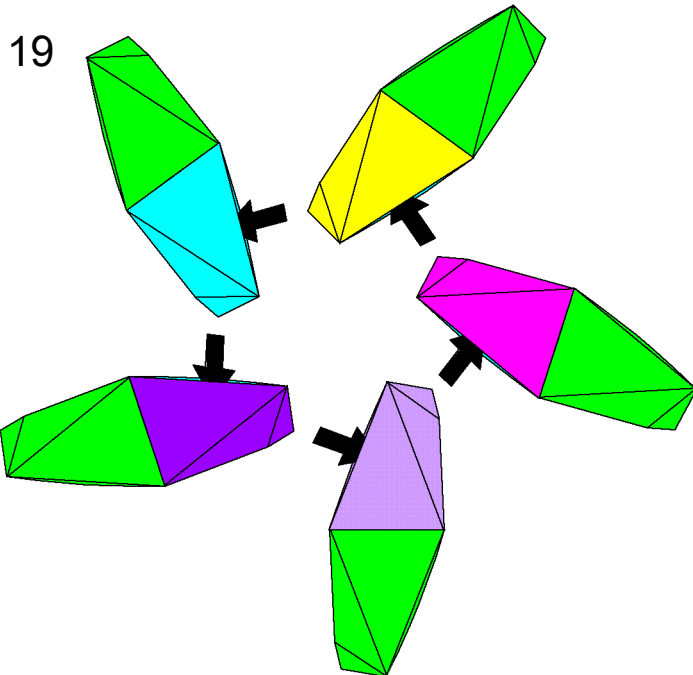


19. Configure the first pair of modules like this.

20

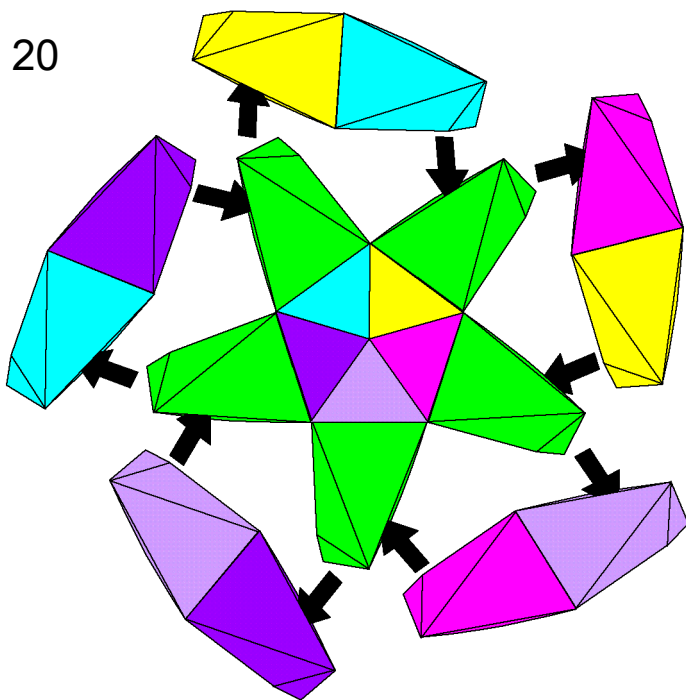


20. This is the result. There are pockets in the positions shown. There are fifteen possible dual colour combinations. Make two of each, or, of course, if you prefer, just make the combinations as you need them.



19

19. Begin by putting five sets of modules together to form a five-sided pyramid ( made using modules of five different colours ) surrounded by a pentagram made from five modules of the sixth colour, in this case green.



20

20. Add five more sets of modules like this.

Continue adding sets of modules until the form is finished, making sure that each of the pentagrams visible on the surface of the form is made from five modules of the same colour. There will be two pentagrams of each colour on opposite sides of the form.

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