

## How to make an origami dodecahedron

You will need $\mathbf{3 0}$ pieces of square paper, all the same size. Post-it notes work particularly well because the sticky bits help to hold the model together as you are making it. These 30 pieces will all be folded in the same way and then assembled to make the final model.

To make a module:

1) Fold a piece of paper in half. Now fold one flap up to the middle crease, and repeat with the other side. Your paper should be W-shaped. (If using post-it notes, make sure the sticky strip is on the outside of the W shape.)

2) Pushing the unit flat, fold up (all layers of) the bottom left corner to meet the top edge. Then fold down all of the top right corner to meet the bottom edge.

3) Now make a crease along the diagonal between the two triangles you just folded.

4) Repeat this with all the other pieces of paper, making sure to follow the exact instructions each time. You should get 30 modules that look like this:

5) The tricky part has now come: assembling the model! The main thing you need to know is how to fit three modules together at a corner.


To fit two together, open up the flap of one module slightly (i.e. the bottom of the W shape) and tuck the second module inside, lining up the crease of the triangle of the second module with the long diagonal crease of the first module. Then tuck in the third module in a similar way.

## Tuck this flap inside the

 first module to line up with the long diagonal.Open up the flap here slightly to tuck the second module inside.

Continue fitting modules together until you get a dodecahedron, which has 12 pentagonal sides.


For an extra challenge, try using three colours and fitting the modules together so three different colours meet at each corner.

The last few modules will be a bit tricky to get in, but don't give up!

