

Origami Stellated Octahedron (or cube or icosahedron)

How to fold each sheet

For the stellated octahedron, each student should have 12 sheets of origami paper (6" by 6" multicolored origami paper is best). It is nice to have 2 sheets each of 6 different colors. (For a cube you need 6 sheets of paper, and for the stellated icosahedron you need 30 sheets.)

Start with a single piece of square paper.

Fold it in half, and then open it again. Fold both ends of the paper so they reach the middle of the square. Turn the paper and fold the sides as seen in the picture. Please note: you can fold either the left side or right side down, but **you must do the same with each piece of paper**. Then fold the remaining edges up and down, so you get a folded square again, with these edges coming out. Turn it around again to fold it diagonally and your first module (sheet of paper) is complete.

Now fold the remaining sheets of paper in exactly the same manner.



How to put it together

Putting all of these pieces together in the correct way is the tricky part. In short, we will simply put the tabs into the correct pockets.

Take 3 modules and set them up as seen in the pictures. This should form the corner of a cube.

Keep doing this, having in mind the form you want to achieve. For the stellated octahedron, keep in mind that next to any "cube corner", where three modules come together at a corner, there must be corners where four modules come together at a corner. No two 3-corners ("cube corners") may be next to each other, and no two 4-corners may be next one another.



Constructing a stellated icosahedron is essentially the same, except that 4-corners are replaced by 5-corners (five modules coming together at a point).