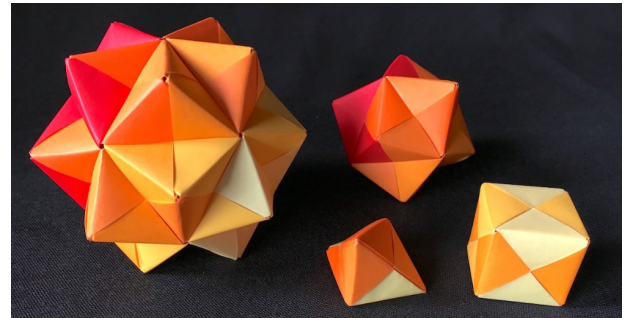


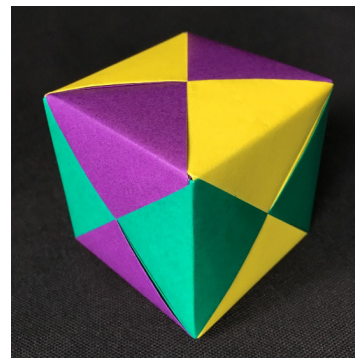
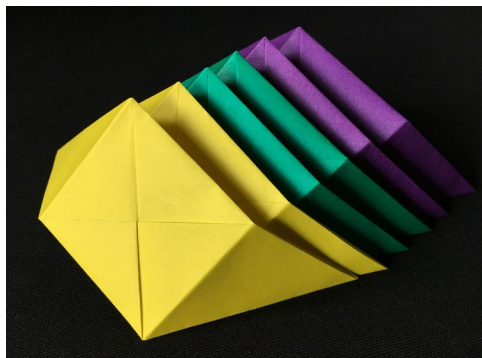
# Making an Origami Sonobe Cube

Now that you have made a Sonobe unit, you are ready to construct a polyhedron. This handout will show you how to assemble six units into a cube. Once you have made a cube, try constructing a small triakis octahedron out of 12 units using the instructions provided separately, or build your own shapes. You can find instructions for making other polyhedra online.

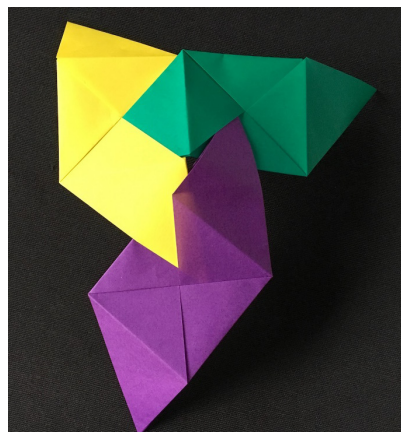
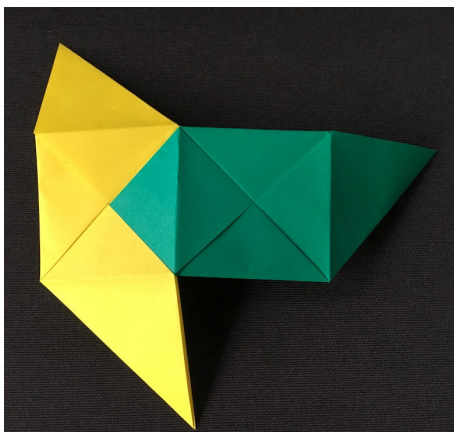
To make the cube, you can use any colour combination you like. In this example we use six pieces of paper in three colours (two pieces of each colour). We assemble the cube so that opposite sides of the cube are the same combination of colours.



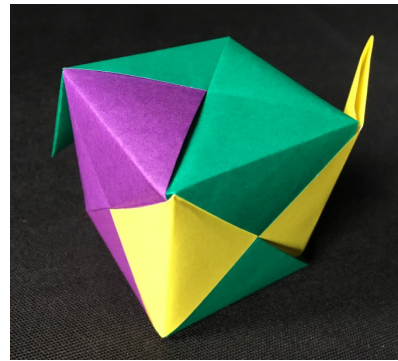
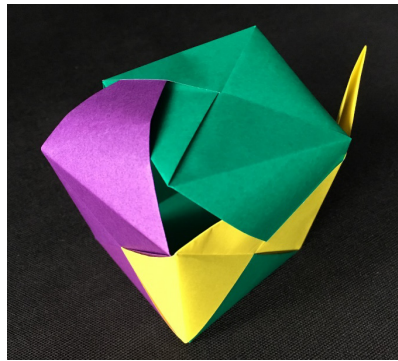
1. Fold six Sonobe units (see the *Making an Origami Sonobe Unit* handout for instructions).



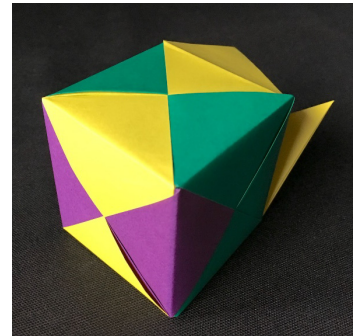
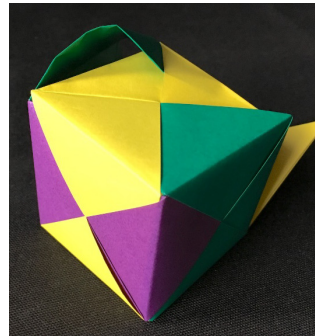
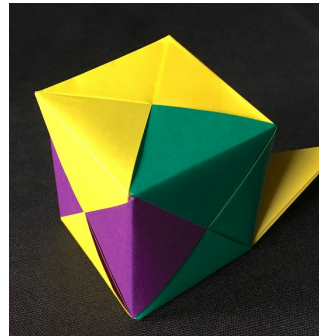
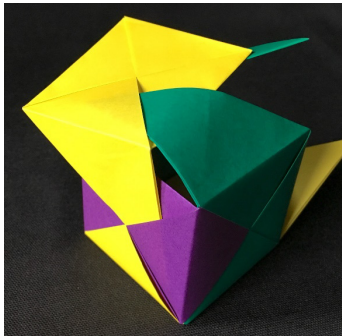
2. Take two units and position them as shown (below, left) so that the left-hand (yellow) unit is vertical, and the right-hand (green) unit is horizontal, with the X's visible on the top of both units. Then push the flap of the right-hand green unit into the pocket of the left-hand yellow unit (below, left). Add a new unit (purple) from below, connecting it to both of the existing units as shown (below, centre). This forms a *pyramid* (below, right) which is the first corner of our cube.



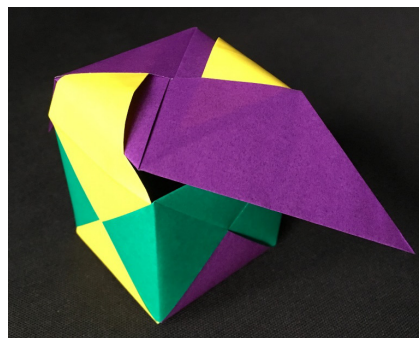
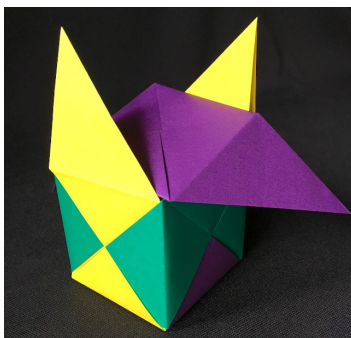
3. **Flip the construction over** so that the green unit is on the bottom. Add a new green unit on top by inserting the flap of the purple unit into a pocket of the new green unit (below, left), and inserting one flap of the new green unit into the yellow unit's pocket. This forms a new corner (below, right).



4. **Rotate** the construction so that the yellow unit is on the bottom. Add a new yellow unit on top. Tuck one yellow flap into the purple unit's pocket (below, left). Tuck the flaps of both green units into the pockets of the new yellow unit. (You may have to bend the green flaps in order to do this.)



5. **Rotate** the construction so that the purple unit is on the bottom. Lift up the two yellow flaps and place a new purple unit between them, with the purple flaps hanging over the sides, as shown (below, left). Tuck the yellow flaps into the pockets of the new purple unit (below, centre and right).



6. Tuck the purple flaps into the green pockets on both sides. Congratulations, you have made a cube!

