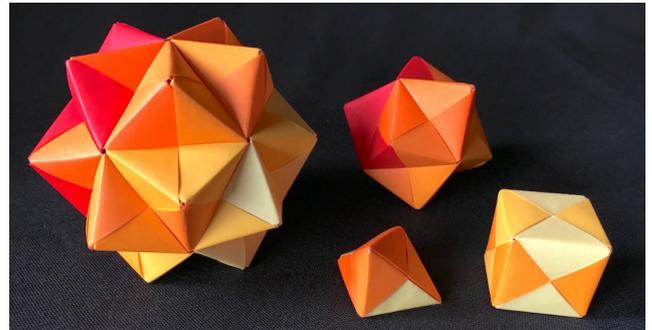


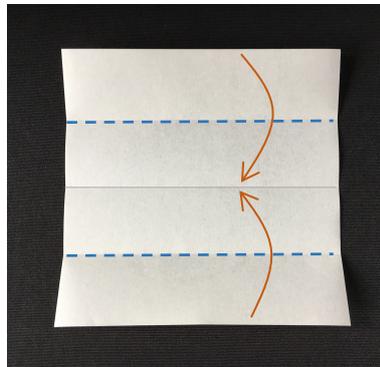
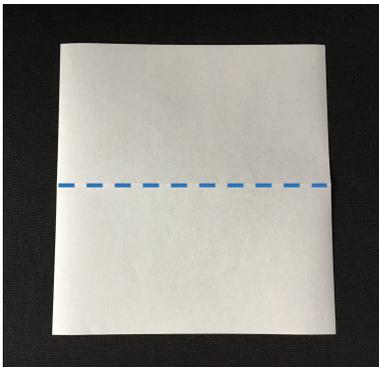
Making an Origami Sonobe Unit

To make these origami modules, you will need one square piece of paper per Sonobe unit. Multiple units can then be combined to form different polyhedra. See our separate handouts for instructions on building a cube (6 units required) and a small triakis octahedron (12 units). Instructions for making some other polyhedra, such as a small triambic icosahedron (30 units), can be found online, or use your imagination and see what shapes you can construct.

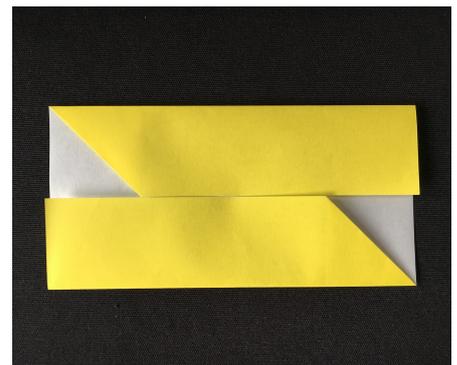
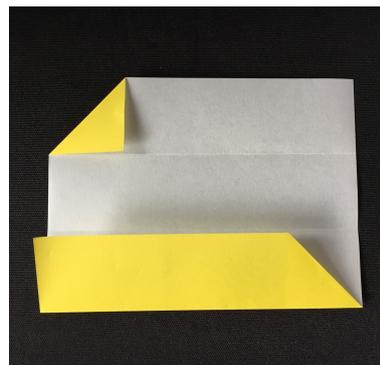
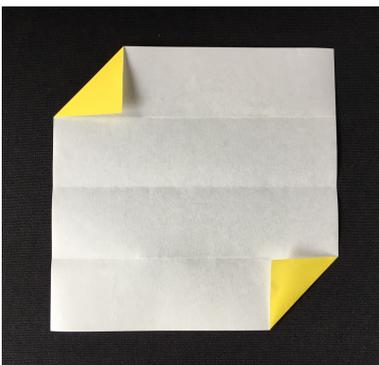


Take your time and fold the units as precisely as possible. This will ensure that they fit together well during assembly.

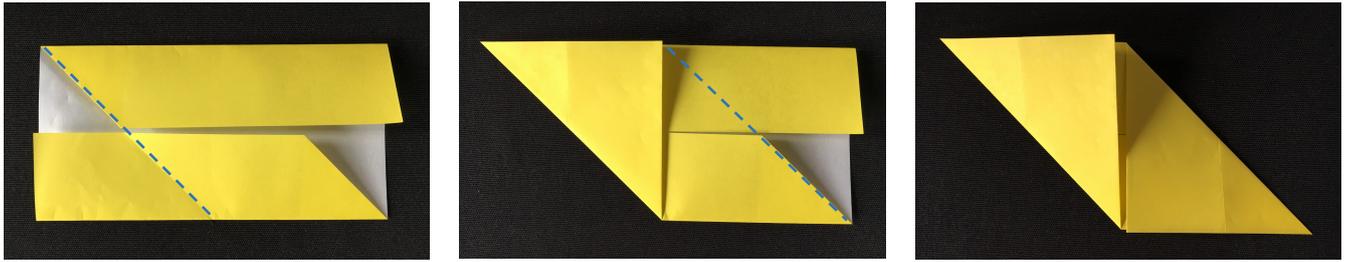
1. If using special origami paper, start with the coloured side down. Fold the paper in half horizontally along the dotted line shown (below, left), crease well, and unfold. Then fold the top and bottom edges to the crease in the centre (below, centre and right). Unfold to obtain the centre image again.



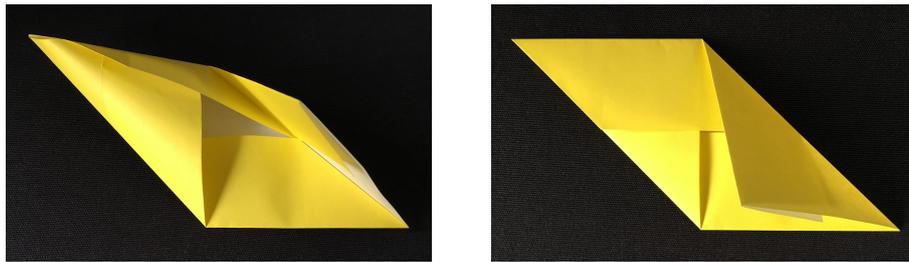
2. Position the paper facedown so that the creases are horizontal. Fold the top left corner diagonally down to the uppermost crease line. Repeat with the bottom right corner, folding it up to the lowermost crease line (below, left). Then fold the top and bottom edges of the paper to meet at the centre line again (below, centre). This time keep them folded (below, right).



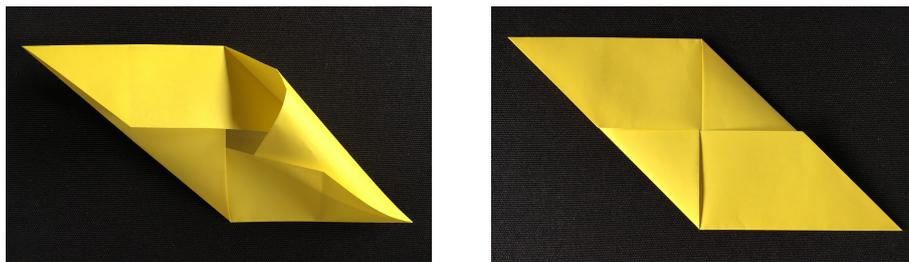
3. Fold the bottom left corner up to the top edge (below, left) to create a triangle (below, centre). Repeat on the top right corner, folding it down to meet the bottom edge (below, centre and right).



4. Underneath each triangle is a flap. Tuck the left-hand triangle all the way underneath the top flap, as shown below. (To make this easier, you may want to first unfold the creases made in step 3.)



5. Repeat with the right-hand triangle, tucking it all the way underneath the bottom flap, as shown below.



6. **Turn the unit over.** Position the unit as shown in the leftmost picture below. Fold the sides inwards along the vertical dotted lines (below, left), to create a square (below, centre and right), then unfold.



7. Your Sonobe unit is complete! The back and front of the unit are shown below on the left and right, respectively. You will need 6 Sonobe units to make a cube, 12 to make a small triakis octahedron, and 30 to make a small triambic icosahedron. See our other handouts for instructions.

