How to make an origami fauxdecahedron
(Fake dodecahedron)

You will need **12 pieces of A4 paper**. These 12 pieces will all be folded in the same way to make 12 units and then assembled to make the final 3D model.

This model is called a ‘fauxdecahedron’ because each of the faces is not *quite* a perfect pentagon, meaning the final model is not *quite* a perfect dodecahedron. For a mathematical challenge, you might like to have a go at calculating the angles in the pentagonal units here.

This model was designed by David Brill and first published his book *Brilliant Origami*. The instructions are reproduced here with his permission.

1. Fold and unfold the paper horizontally and vertically in order to find the centre.
2. Fold the top left and bottom right corners into the centre.
3. Fold the top right and bottom left corners into the centre.
4. Fold in half vertically, tucking flaps A and B inside each other so that the two halves interlock.
5. Fold the left arm towards the centre line, so that the corner makes a right angle. (This can be a bit hard to judge, but do your best!)

6. Do the same with the right arm.

7. Make 12 of these units. Each unit has two pockets, two tabs, and a bottom edge without a pocket.

8. Start to assemble the fauxdecahedron by inserting the tab from one unit into the pocket of another unit. The diagram here shows how three units fit together around a point.

For the best model, we recommend placing the units so that the bottom of one unit sits adjacent to the bottom of another unit, as shown by the stars in the diagram.