

Make your own little building block!

Obviously it will be a decent size, because it's definitely not nano-sized. It may look like a block, but it is really a box made out of self-locking parallelograms – six of them.

Oh! So you want to know what a parallelogram is? It's a quadrilateral. Aha! And what is a quadrilateral? Why, it's a polygon of course! My gosh! Yes I know, I was a bit confused too! But enough. Let's get down to the nitty gritty. A parallelogram is a shape where the opposite sides must be of equal length. Of course, this means the sides are parallel to each other, hence the name parallelogram. Right, now that we've finished the maths lesson, let's carry on with the activity and you'll see what I mean.

Here's how you do it:

First you have to make the parallelograms. You need six square pieces of paper. You can either use one colour, or if you want to be fancy, use different coloured paper. You can even use wrapping paper, but each piece must be exactly the same size square. Those little squares of note paper you get in the plastic boxes work a treat, especially when you are doing this for the first time.

Did you know:
A single piece of paper is 100 000 nanometres thick.

1 Take one piece of square paper. Fold it exactly in half and crease it.



4 Fold the top right-angle corner in half. Crease it and open it up.



Open it up again. You'll see a nice straight line right down the middle of the square.

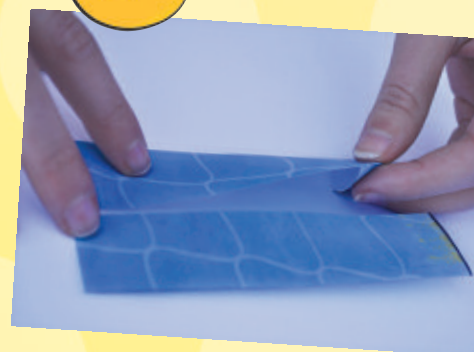
3 Now, fold the two edges of the square inwards to touch the middle crease. You'll end up with a vertical rectangle.



5 When you open it up, you'll see a small triangular flap on the left-hand side.



6 Fold the little flap inwards.



7 Now insert the right-hand corner between the folds on the left vertical rectangle.



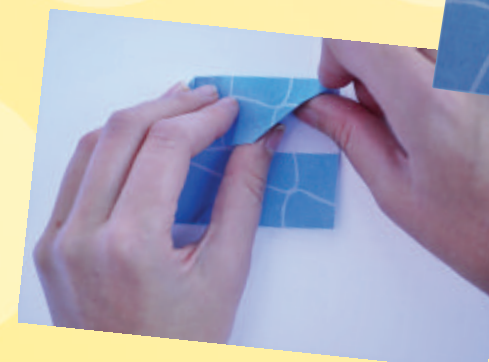
8 Now you need to do the same again at the bottom.



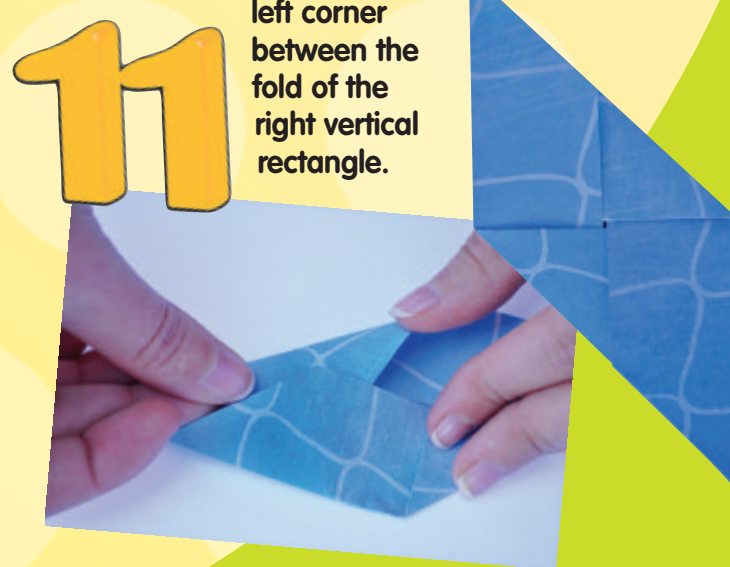
9 Take the lower left corner of the rectangle and fold it in half.



Open the crease and fold the small triangular flap inwards.



11 Insert the lower left corner between the fold of the right vertical rectangle.



Hey presto! You now have a self-locking parallelogram. You'll see that the lengths of the opposite sides are equal. Turn it over. You'll note that one surface of this parallelogram is plain and smooth and the other has four pockets. Remember, the neater and sharper you fold, the nicer your box will look.