

The Paperfolder's Life List..

31 Teach Mathematics

Tom Hull, Robert Lang, Sue Pope and John Smith are among those whose work has clearly drawn together the connection of origami with mathematics. For those though, who just like the pleasure of folding, the recreational mathematics of David Mitchell is the area to investigate.

One such example (see pic below) which works particularly well in a classroom, is a routine using the piece that David calls, the leftover rectangle. It is the strip that is removed when you convert an A series (eg A4) piece of paper into a square and is usually discarded.

So, taking the strip, what is the resulting shape when you fold in the corners as shown? Now fold in half to form an isosceles triangle, interlocking the flaps to hold it together and investigate how these can fit

together to form patterns. Back to the strip. Place four onto the original square to form an octagon. They 'overlap rotationally!' To do this lay one rectangle diagonally on top of the other so that the corners are aligned. Then add the others in the same way. Doing this means that the octagon forms naturally with minimal adjustment at the end.

If you fold the strip from a corner to a diagonally opposite corner you have, what is called, a Cairo tile. See how they fit together. As hexagons tessellate, you can fold a number of Cairo tiles in four colours and then use them to make a much larger display. I have found that often children are much better at this than adults.

If you try this, you will find there are extra hexagons within the pattern going across as well as up and down. All really good stuff!

