Lifelong Learning Programme

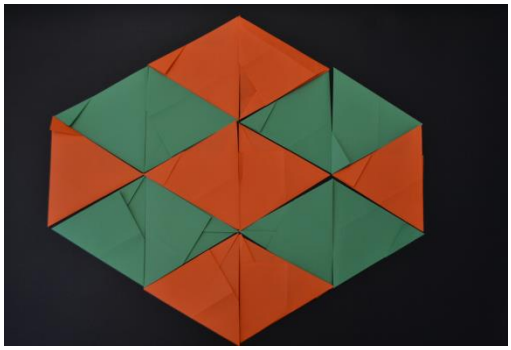
MiMa
Mathematics in the Making

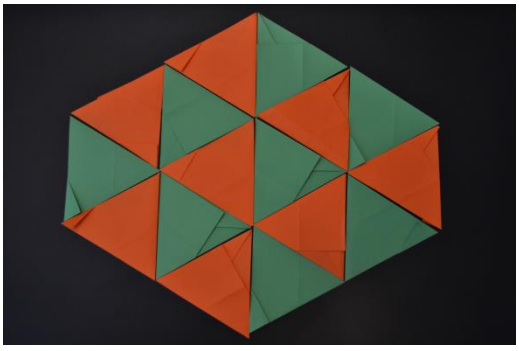
How to make tilings

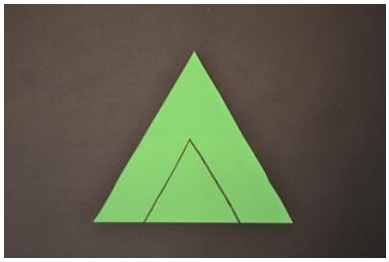
This instruction shows how to make tilings from a triangle shaped base. Equilateral triangles can be used to cover an area without wholes and without overlapping. This is because their angles are 60°, which is a divisor of 360° (full turn).
When cutting out a random shaped piece of the triangle and sticking it onto another edge, a new shape is formed, which can be used for forming a tiling too. These instructions show three different possibilities of creating tilings this way:

1. Cutting out a piece from the middle of one side and sticking it onto another
2. Cutting out a piece which is the same length as one side and sticking it onto another
3. Cutting out a piece from a half of one side and sticking it onto the other half on the same side.

As you can see, the results are really beautiful (p.t.o.)!



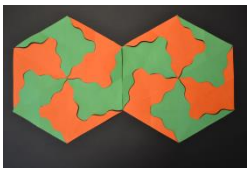




This example shows how to cut out a shape from the middle of one side. Choose a shape and cut it out. Stick the cut out shape onto ...

...one of the other sides of the triangle. It is important that you stick it onto the edge in the same distance from the vertexes as it was originally.

Then copy your pieces onto pieces of paper, you can use different colours, and put them together to make a tiling.

The more pieces you make, the bigger your tiling gets.

You can use different shapes for making the tilings. See the second and third example below for getting more ideas.