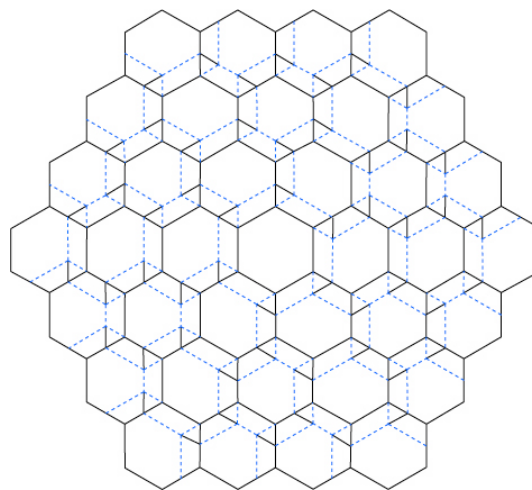


This was the first origami tessellation that I discovered on my own, while exploring the possibilities of folding a grid of equilateral triangles. It is a simple tiling based on a single repeated hexagon. The hexagons circle around the center of the pattern, almost appearing to be stacked on top of each other. This pattern can be folded from any shape of paper, but it really looks the best when folded from a hexagonally-cut piece.



1.) Start with a triangular grid, preferably one divided into 16ths or 32nds. Mark out a hexagon in the center of the grid, with the sides of the hexagon being two pleats wide. Pinch the pleats extending from the corners of the hexagon, as shown.

2.) Fold over one of the radiating pleats, thusly folding flat one of the corners of the hexagon. This method covered in the flat-fold pleats discussed on page [page XX in the basics section].

3.) Continue this folding process around the central hexagon, folding all the pleats flat and oriented in the same direction.

4.) The finished central hexagon.

5.) Now, follow one of the radiating pleats outwards by one pleat width; flat-fold the pleats here as well. Continue this process around all 6 sides of the hexagon.

6.) Step 5 completed on all sides.

7.) Open up one of the pleat intersections, and fold the tip inwards to make the pointed shape become a regular hexagon. Make sure the pleats here are oriented in the same direction as your pleats from step 3. Continue this process on all sides of hexagon.

8.) Step 7 completed.

9.) Repeat the same process from step 5 on all the radiating pleats; fold the pleat intersections just as you did in step 7. Continue this around all sides of the hexagon.

10.) Step 9 completed for one side of the hexagon.

11.) Step 9 completed on all sides.

12.) At each level of iteration, there will be more hexagons; by maintaining the same pleat orientation, the folds will all flow into each other. This tessellation can continue to be folded infinitely by following the basic folding pattern, regardless of how many rows of hexagons are added.

Spread Hexagon Tessellation

1



2



3



4



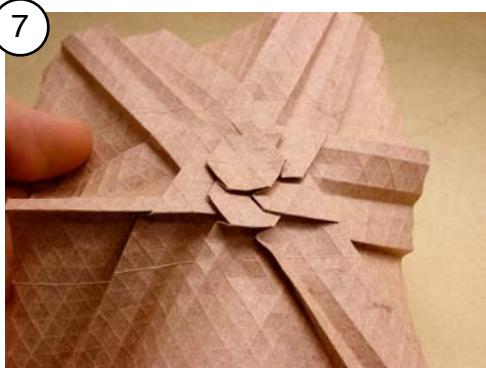
5



6



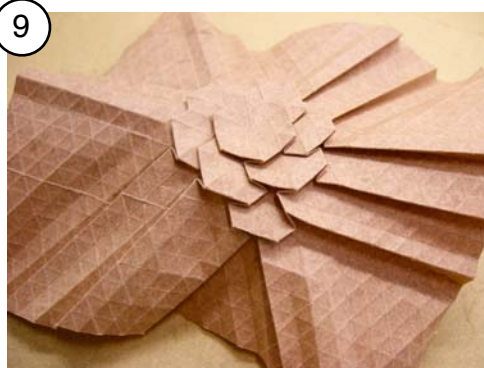
7



8



9



10



11



12

