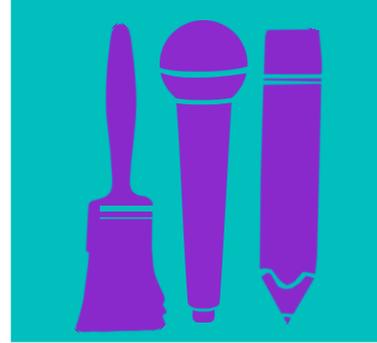
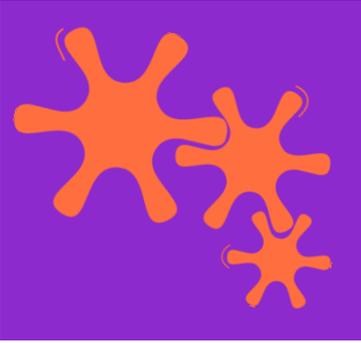


SPIRIT OF INNOVATION

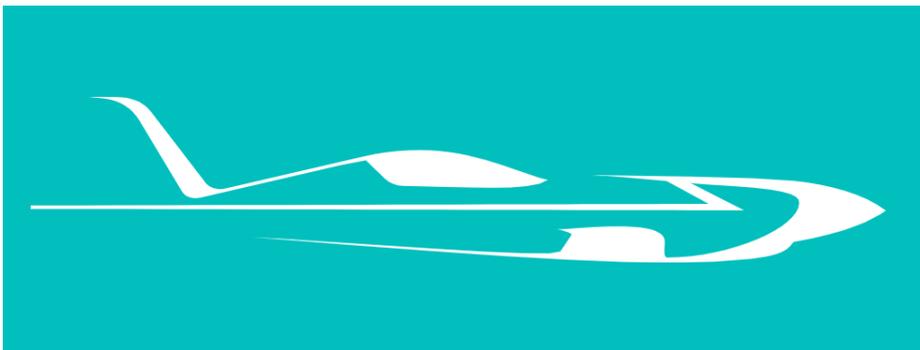
**STEAM
RESOURCES**



Spirit of Innovation

Year Six

Presentation – M C Escher

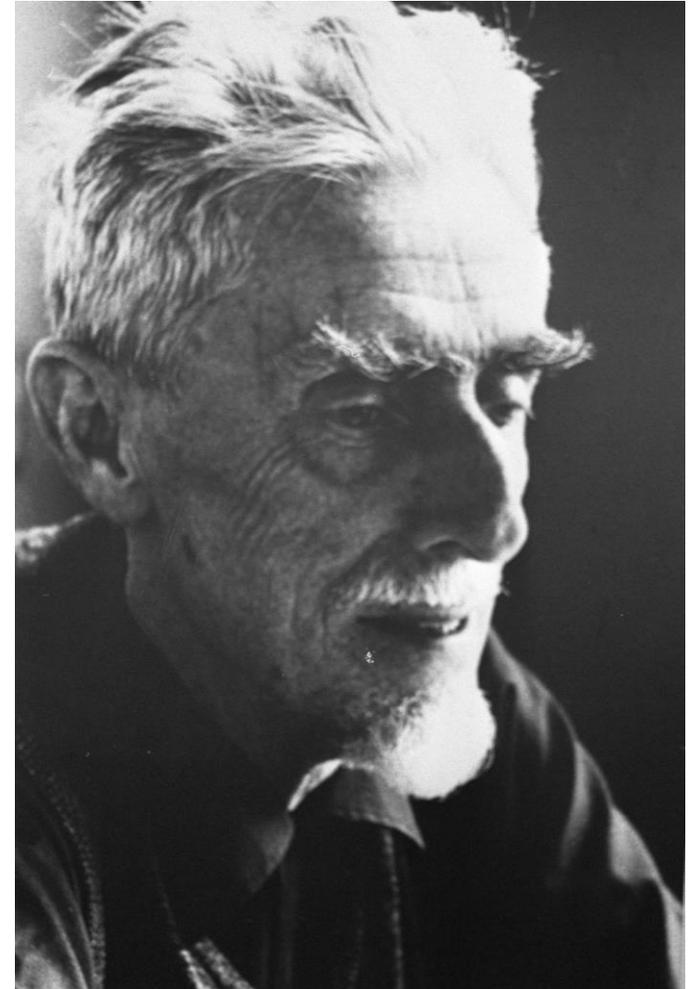


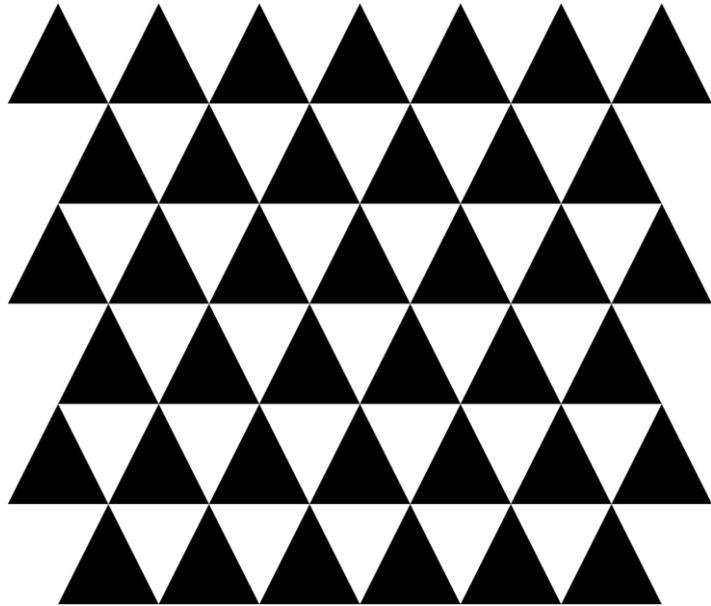
Tessellation – M C Escher

Tessellation is a way of tiling a surface with the same shape, repeated again and again. These shapes must fit perfectly together so that there are no overlaps or gaps.

<https://www.youtube.com/watch?v=7GiKeeWSf4s>

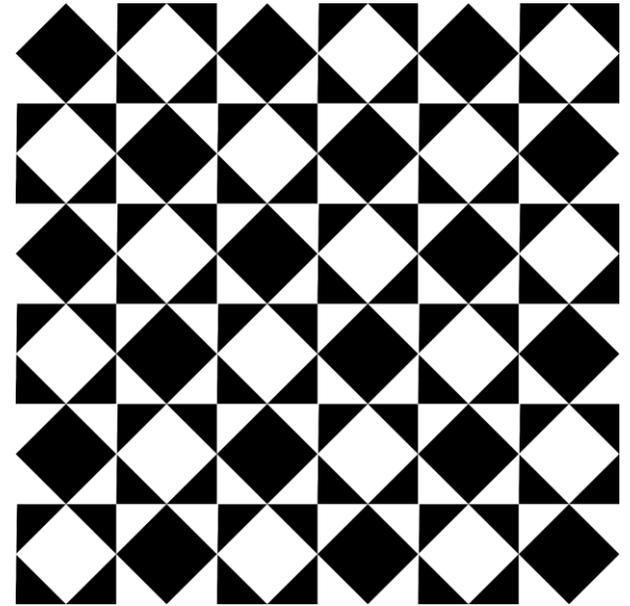
Maurits Cornelis Escher was born in Holland on June 17th (1898-1972) He is one of the world's most famous graphic artists. He is known for his use of tessellation, producing his first piece of tessellating artwork in 1925. Interlocking lions, block printed on to silk. By the time he died in 1972, he had created 137 piece of tessellating artworks!



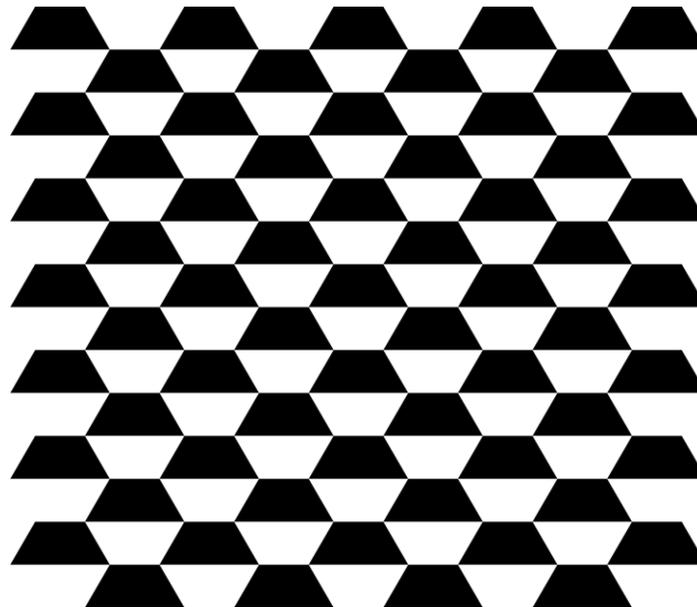


Regular Tessellations

Triangles, squares and hexagons are the only regular **shapes** which **tessellate** by themselves.

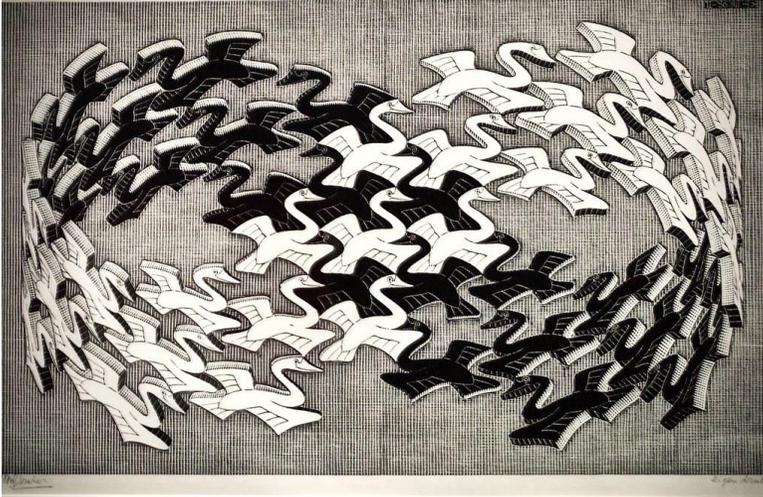


[Tessellation Art Link](#)



[How to make
you own
tessellating tile
link](#)

M C Escher



Swans



Fishes and Scales

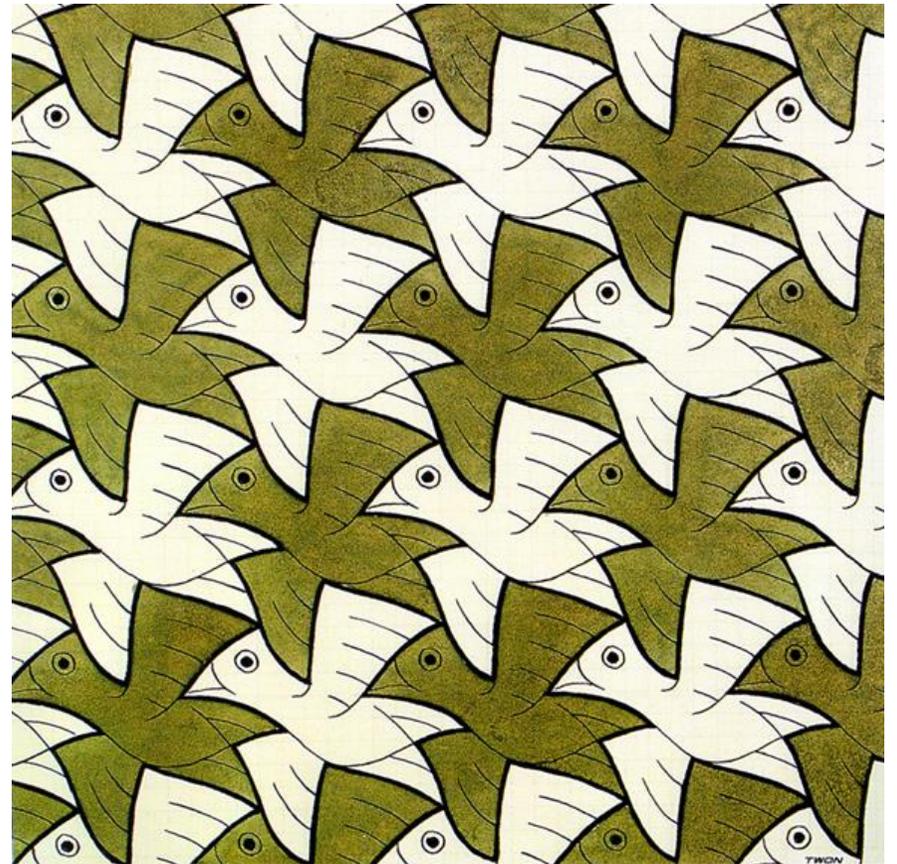
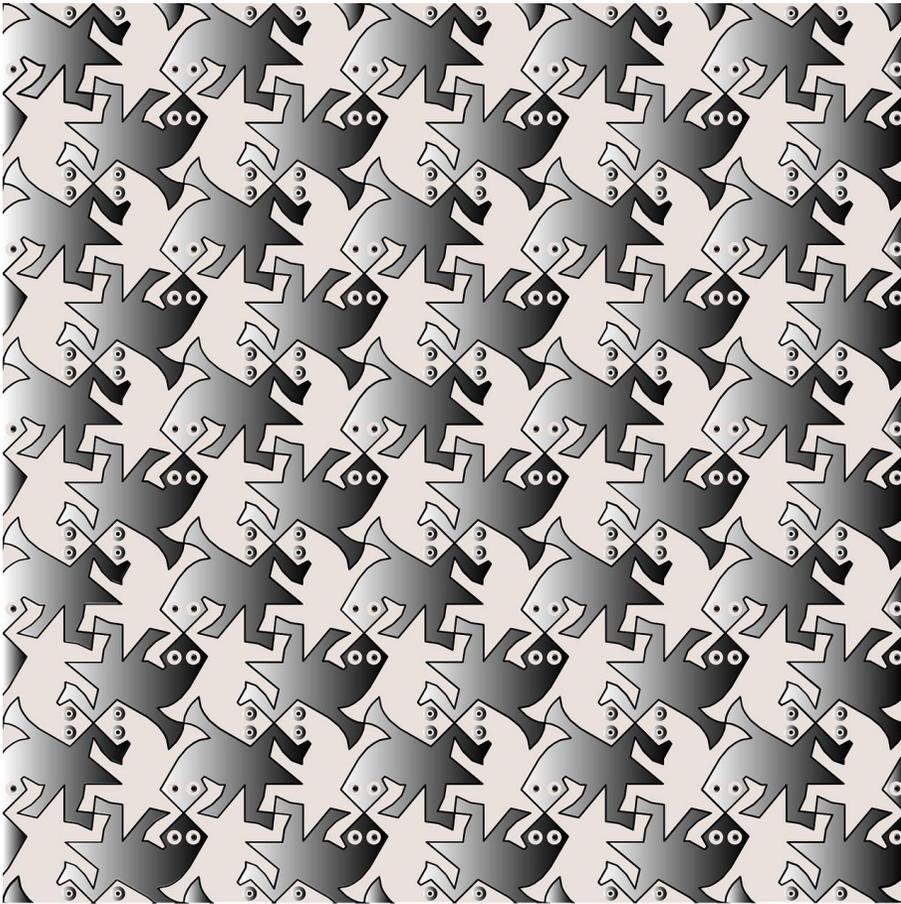


Butterflies

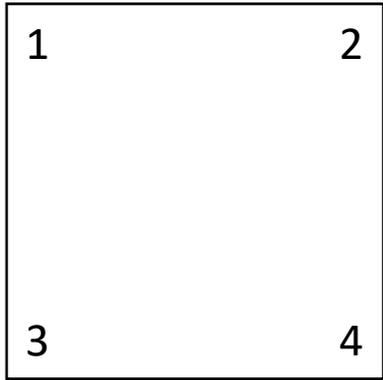


Two birds

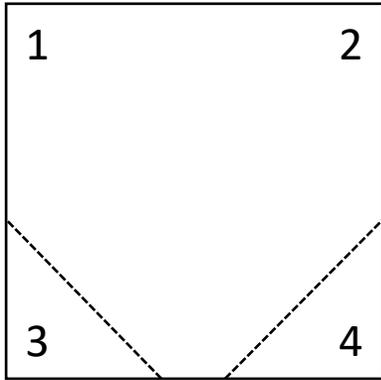
In the style of M C Escher



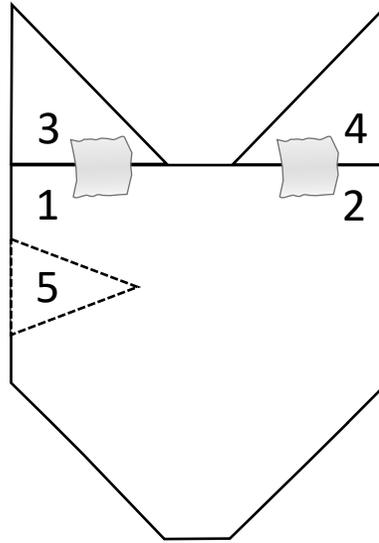
Using a Square Tile



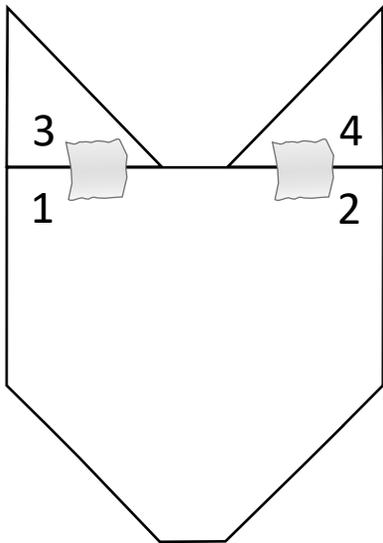
Start with a square tile of cardboard.



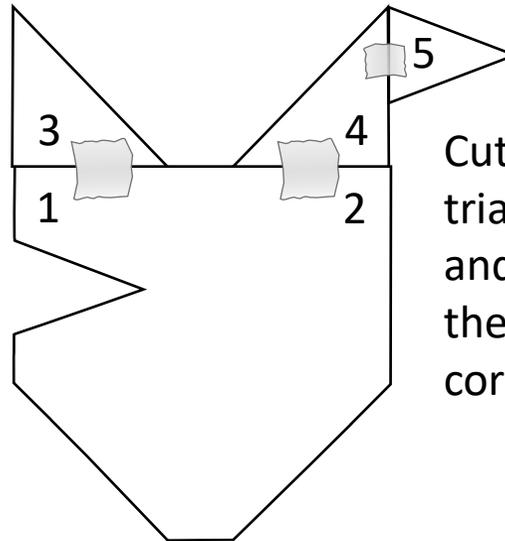
Cut along the dotted lines.



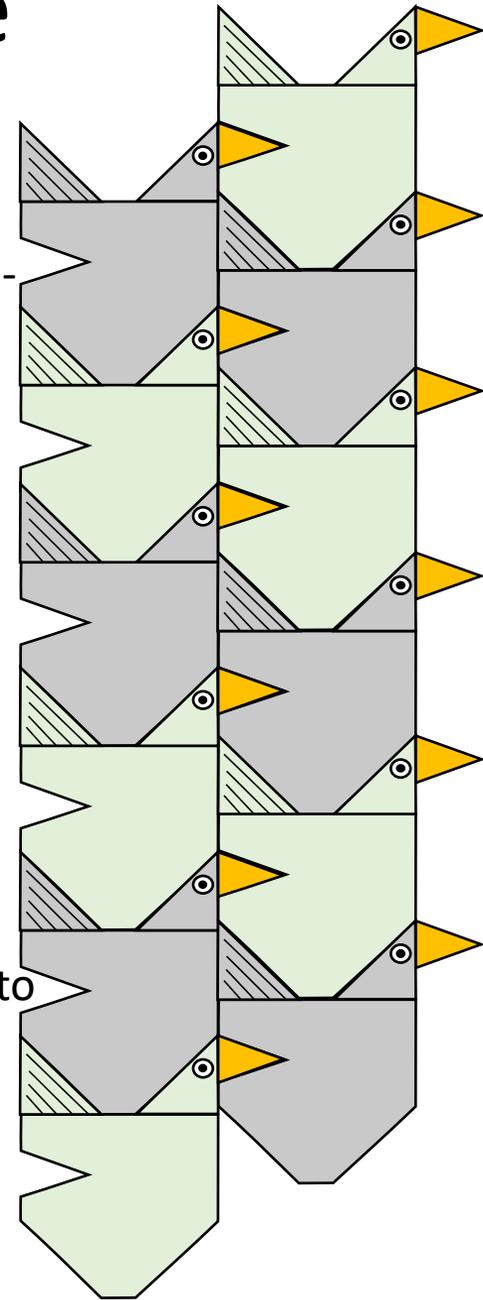
Draw a triangle midway down the tile.



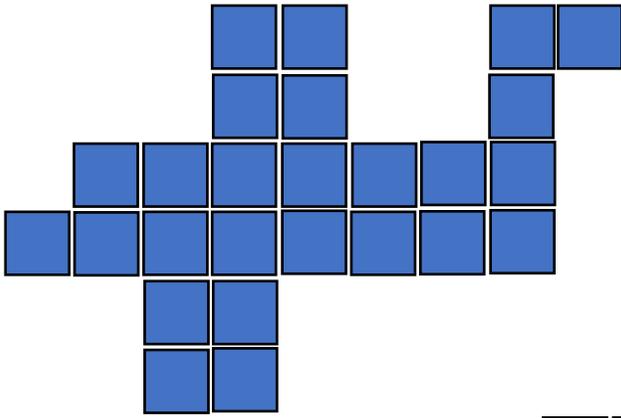
Join the bottom corners to the top of the tile.



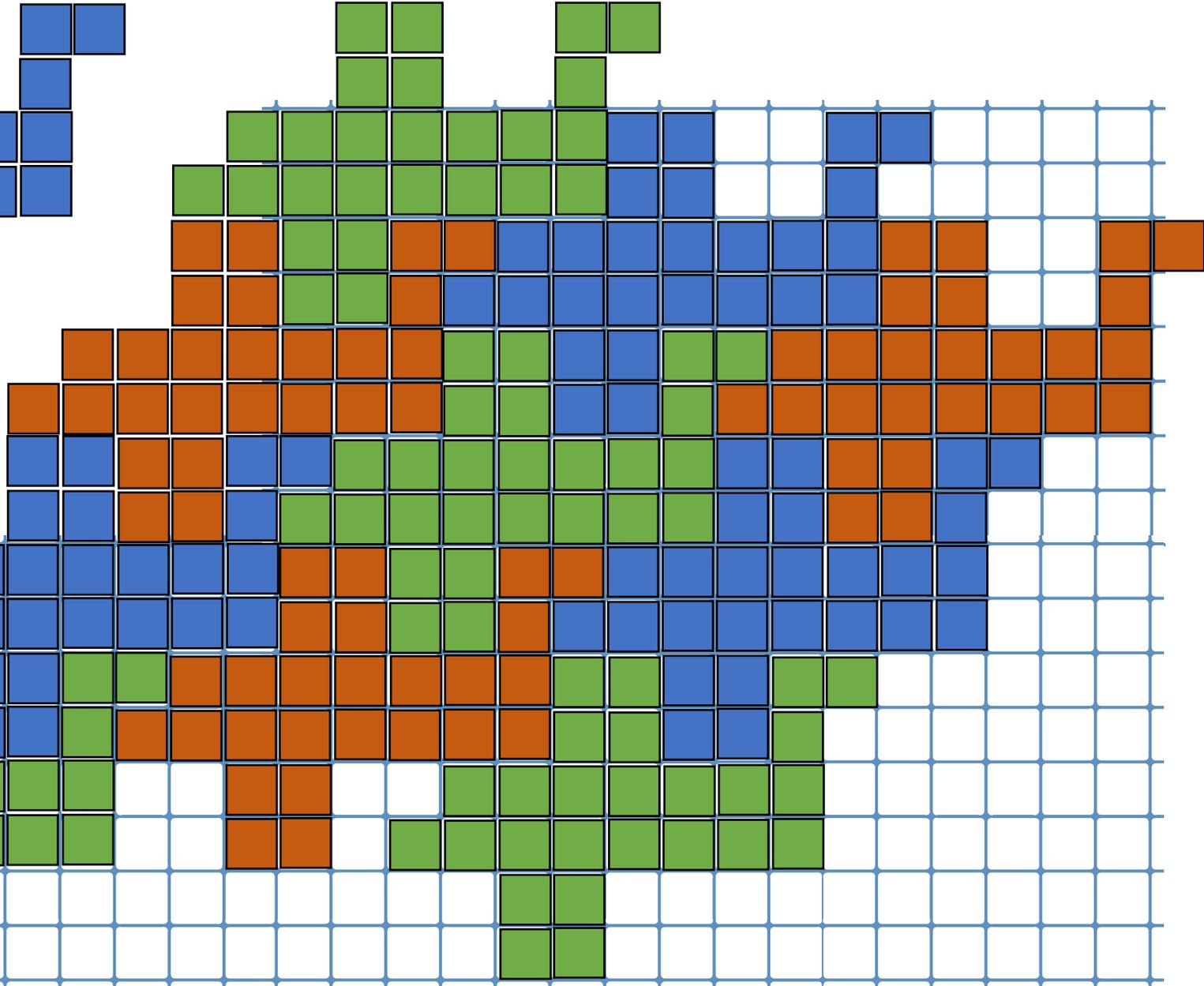
Cut the triangle out and tape it to the top of corner 4.



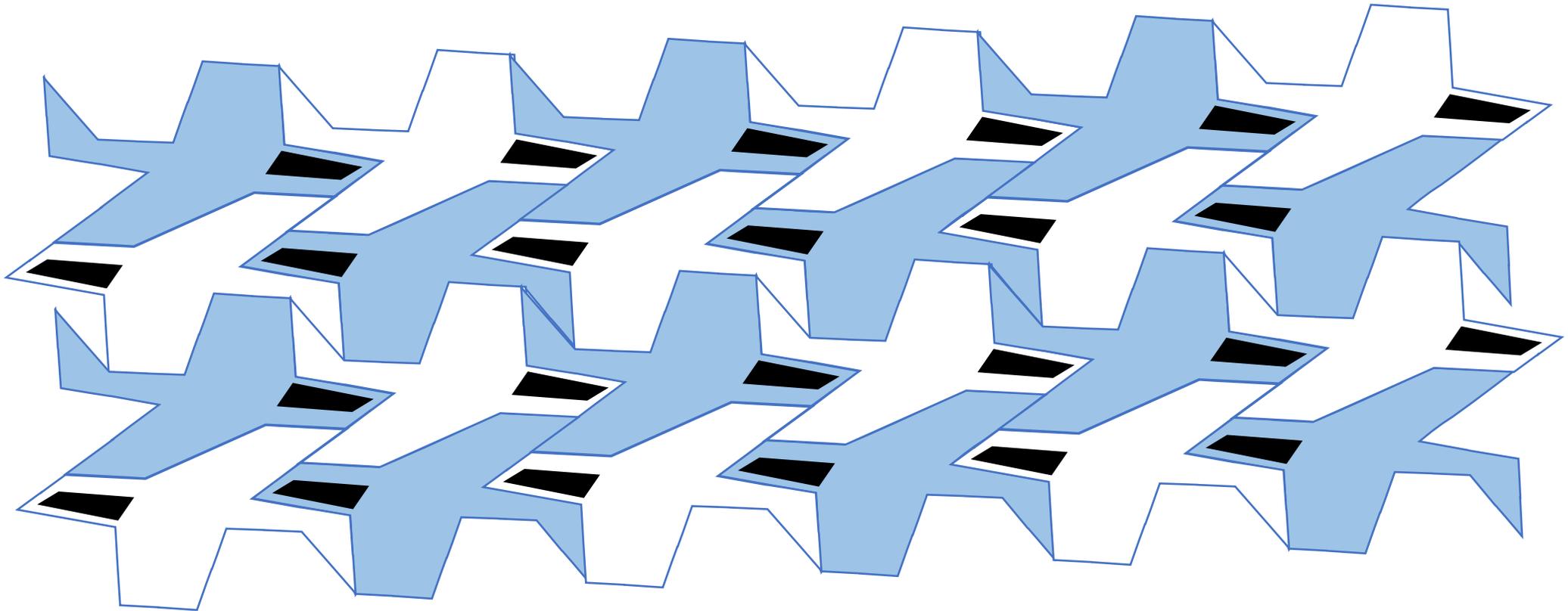
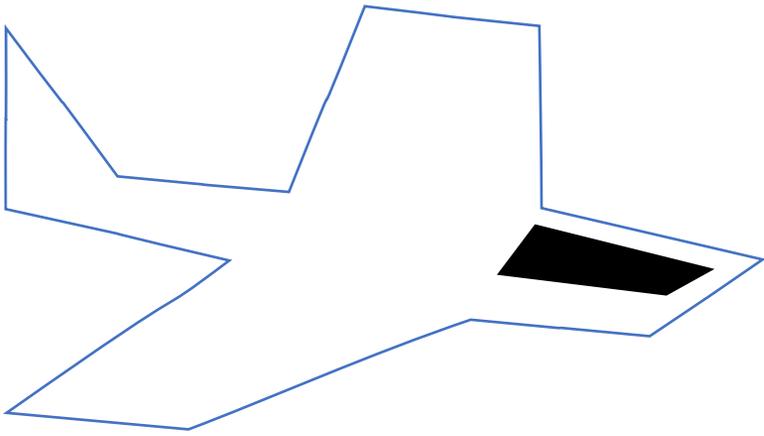
Using Gridded Paper



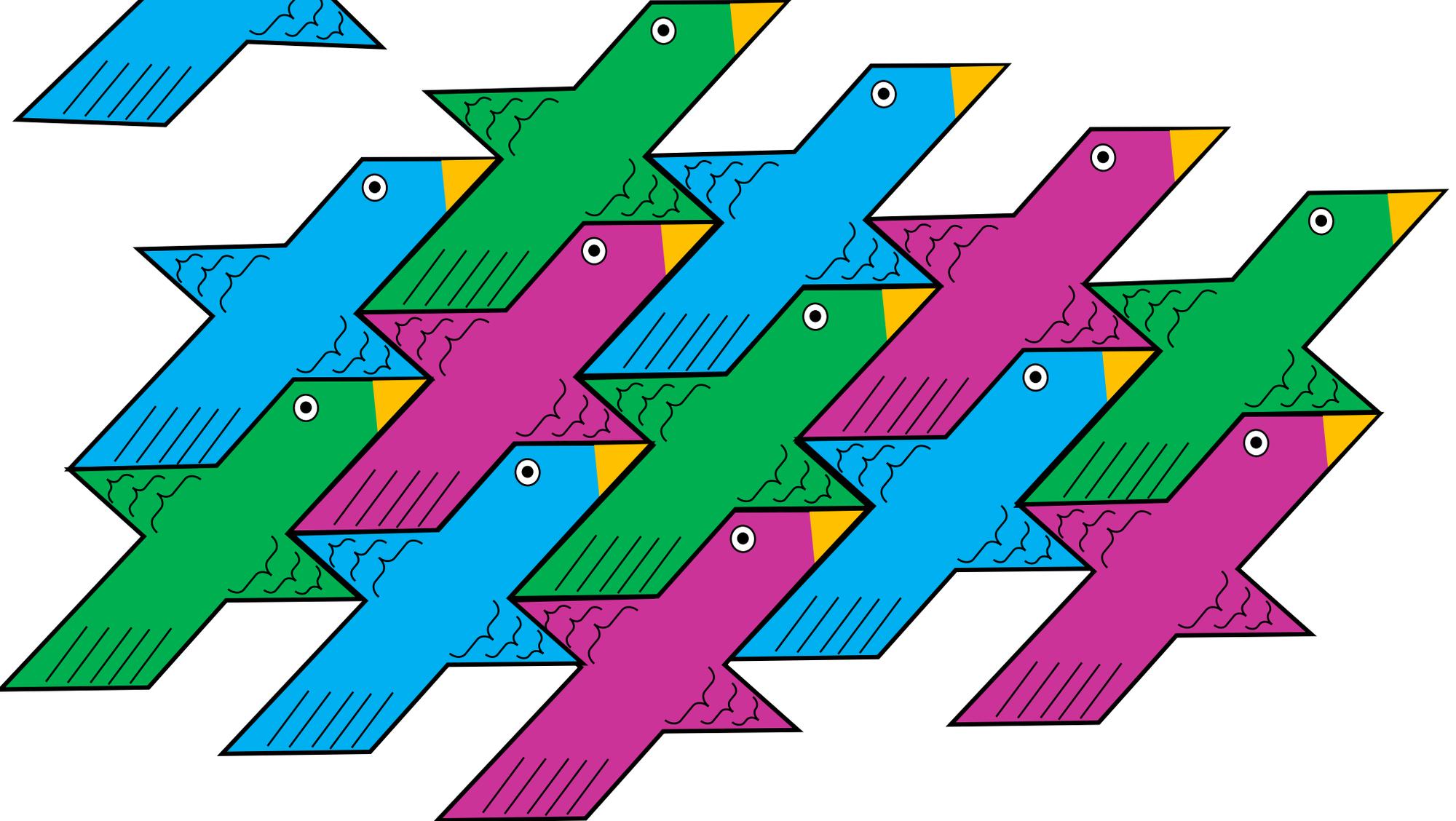
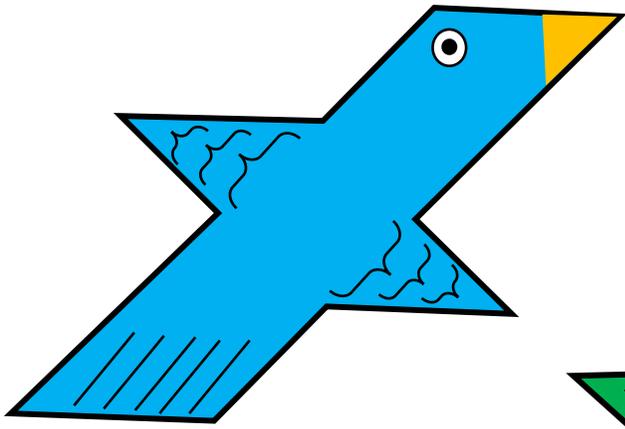
Use gridded paper to design a simple tessellating shape.



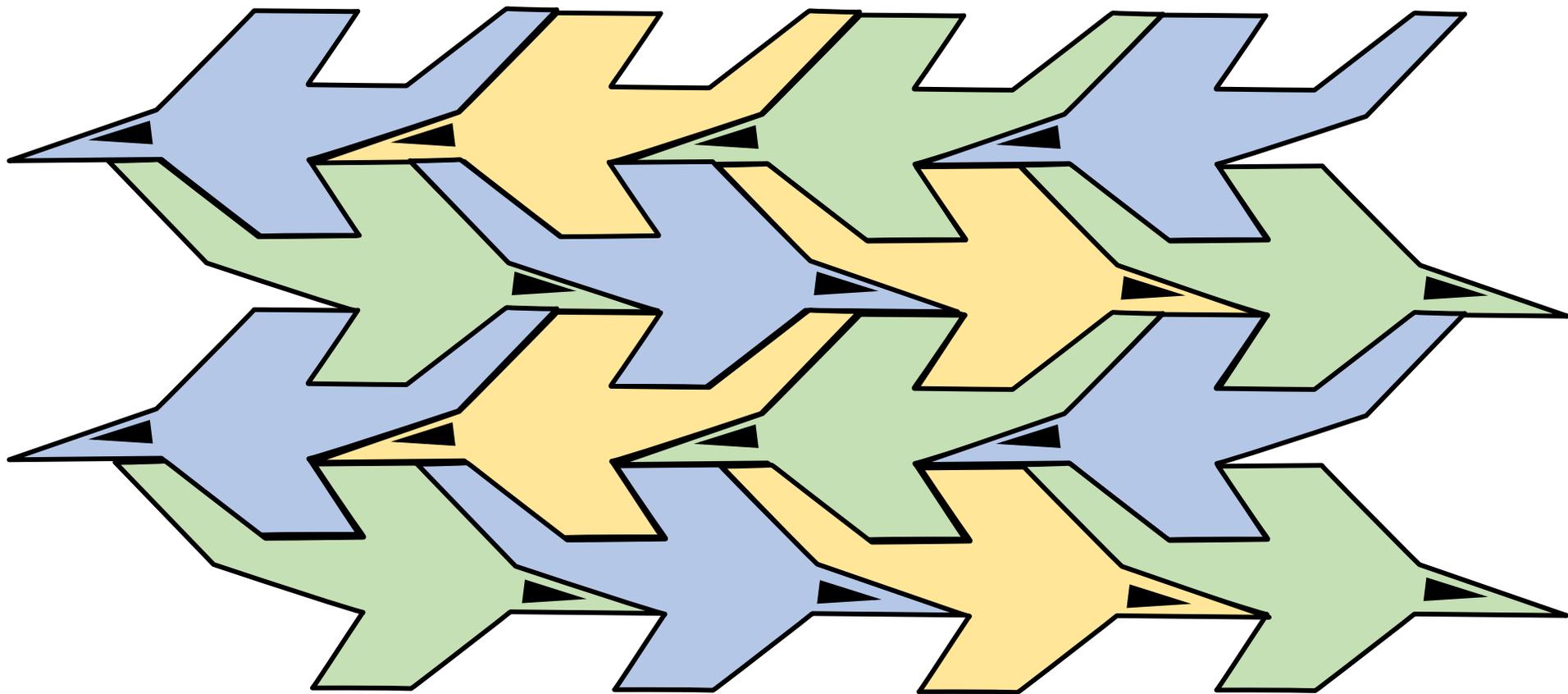
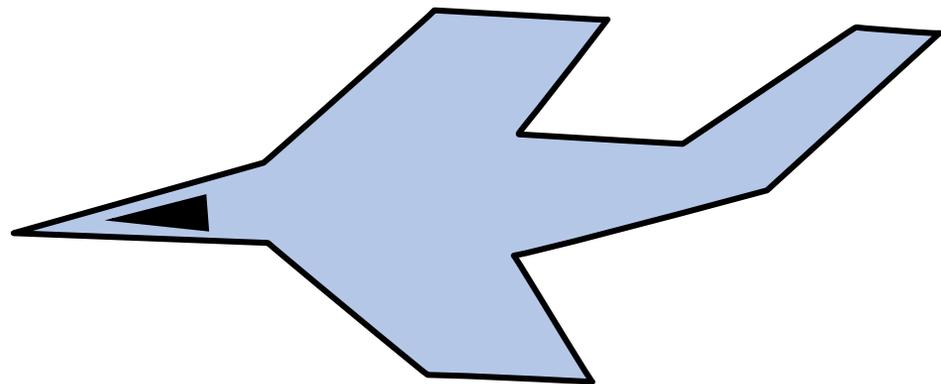
Tessellating Planes



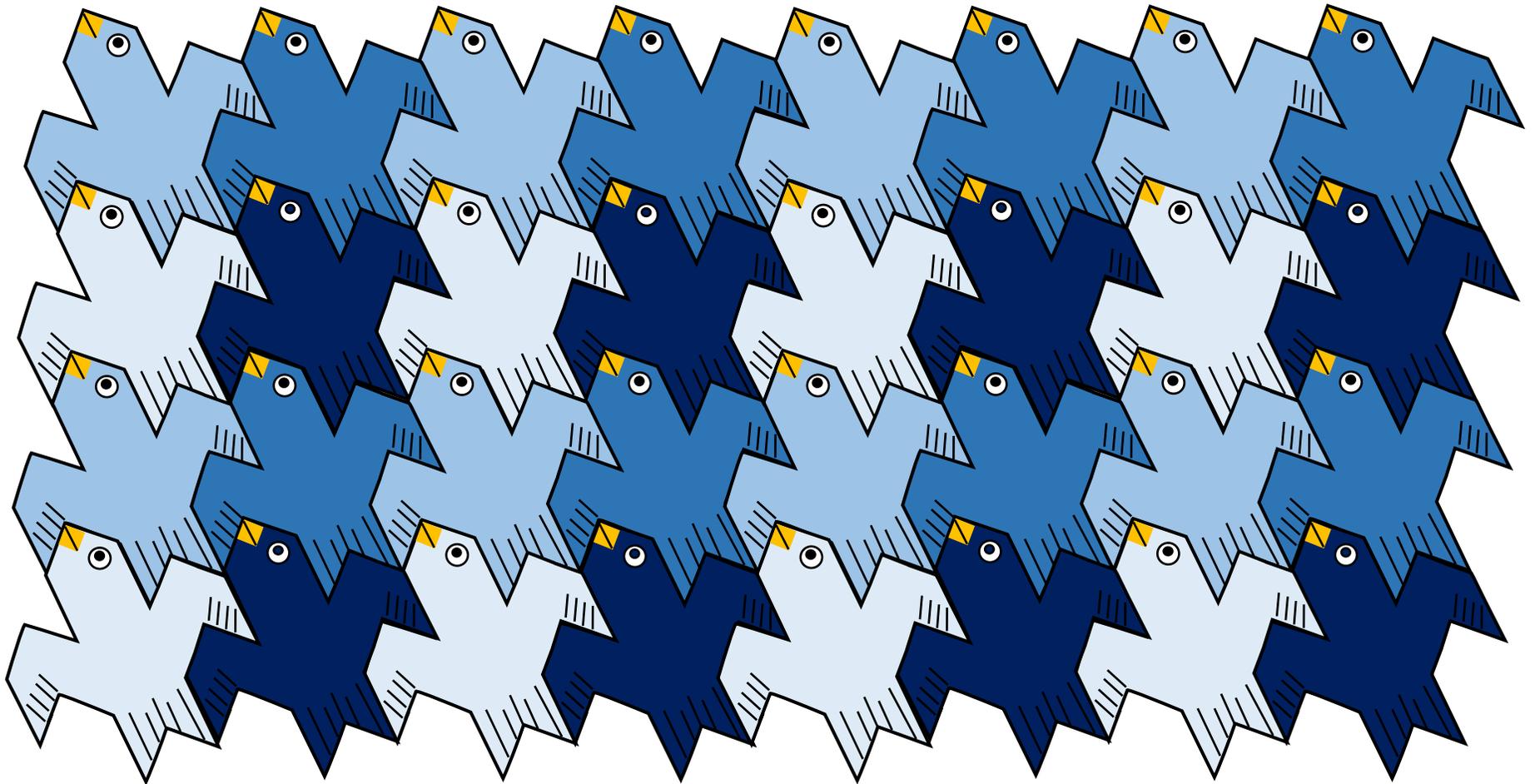
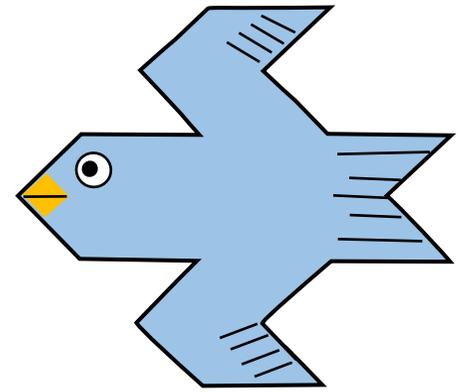
Tessellating Birds



Tessellating Planes



Tessellating Birds

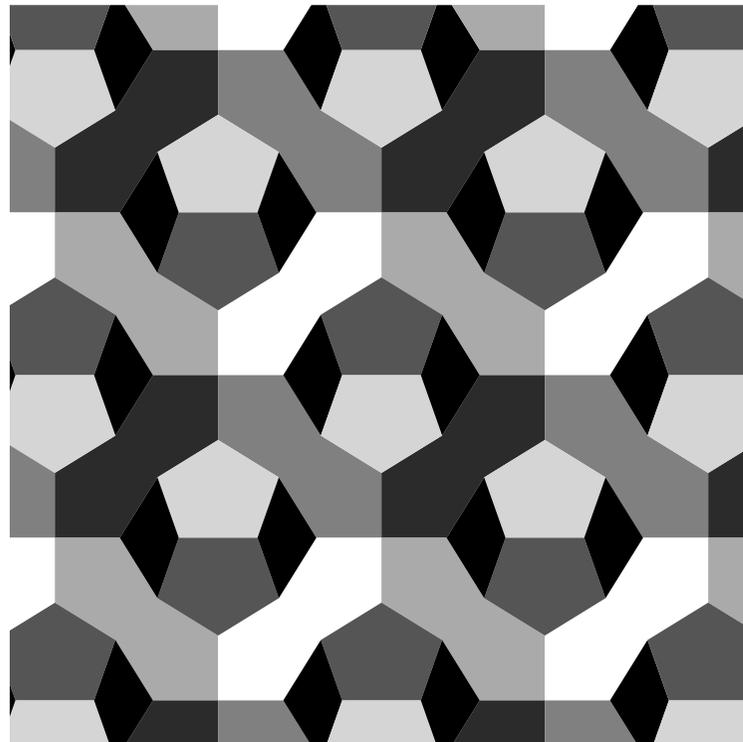


You can make your own tessellating pattern on Scratch.

Click the link to learn how.

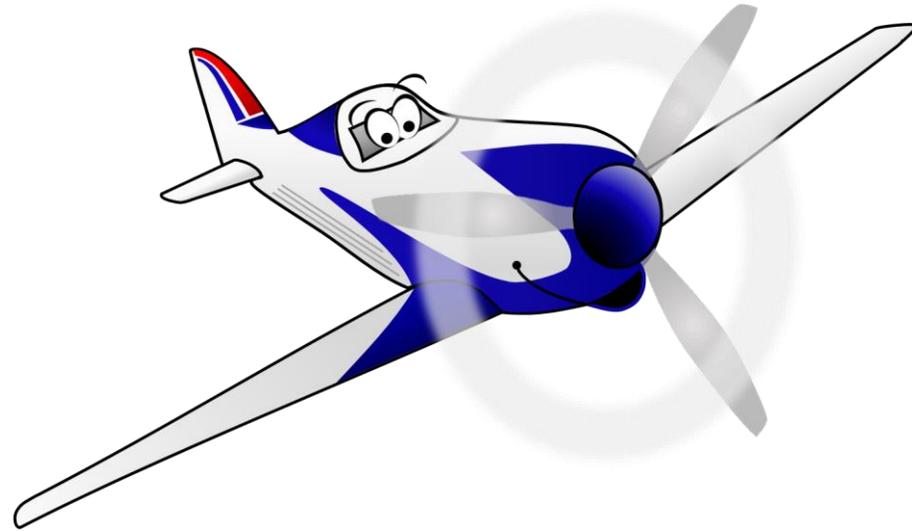
[Tessellation using Scratch](#)

Then use what you have learnt to make your own Scratch tessellation!



```
when clicked
  Tessellate cubes 10 times

define Tessellate cubes a number of times
  set Columns to 1
  switch costume to tile-white
  go to x: -250 y: 200
  point in direction 180
  while not Columns = a number of
    repeat 6
      repeat 3
        create clone of myself
        turn 120 degrees
        next costume
      if Columns mod 2 = 1 then
        change y by -66
      else
        change y by 66
      change Columns by 1
    go to x: x position + 57 y: y position + 33
```



These resources have been brought to you by



PIONEERS OF POWER