

Tessellations for the whole family!

Erin Vance, Libertyville, IL *(with resources from various sites including Crayola and Mrs. Otter Art Studio)*

Grade Level:

Pre K-HS (can be modified for difficulty and done with parent or older sibling assistance)

Length of lesson:

30 minutes - 3+ hours

Materials required:

Paper or post it notes, tape, scissors

Technology required:

None, but can use internet device for helpful instructional videos

Lesson Steps

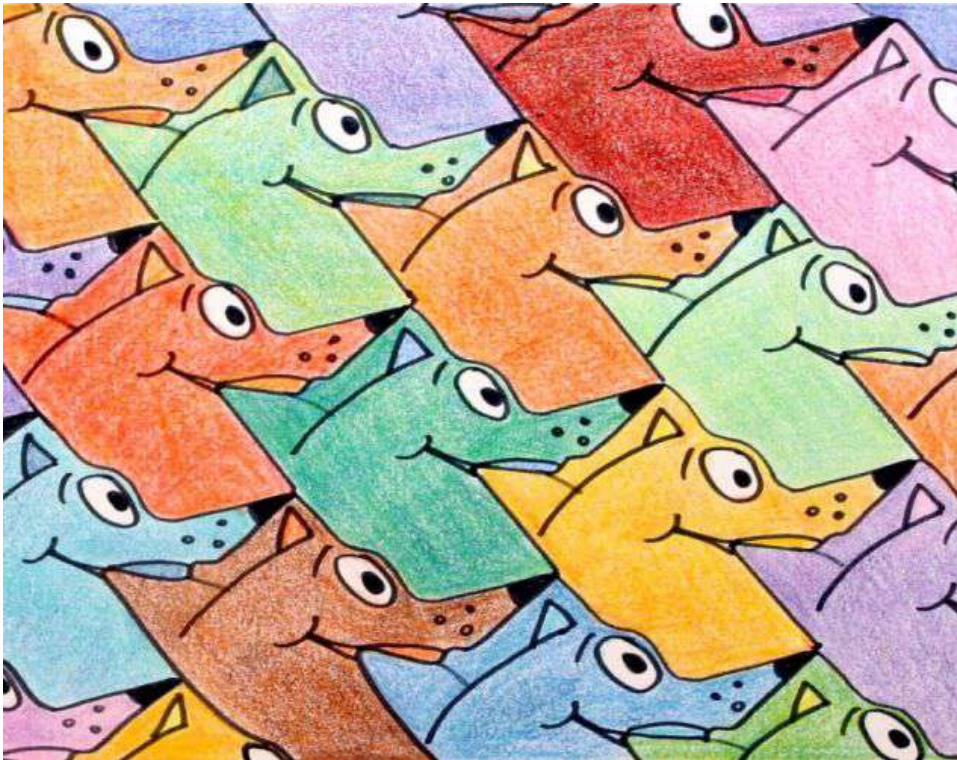
1. Find square paper like a Post-it note, or cut paper to a 3x3 or 4x4 square. *The larger you cut the square the bigger your tessellation. Any larger than 5" would be too large to be effective.*
2. Choose one of the 3 simple types of Tessellations. (see images below) Use each worksheet to guide your cutting, shifting, and taping of the pieces of paper.
3. Once you have created your tessellation shape, you can test it by tracing the shape on the middle of a piece of paper you have available (i.e. letter sized computer paper). Once you trace it once, slide your shape left, right, up or down carefully and see if you can match up the shape, like a puzzle, to the one you just traced. If the tessellation was done correctly, it will fit like a puzzle over and over on all sides. You can continue to trace the shapes as many times as you'd like.
4. Take it one step further and think about what your shape might look like. An animal? An object? A person? If you see something, you can add detail inside the tessellation to enhance the animal/object/person you see! (like eyes, or a mouth).
5. If you want to take the exercise to a more finished look, you can grab some coloring tools like markers, colored pencils, or even crayons to add color and/or shade the edges of your shapes.(see examples)

Additional Resources:

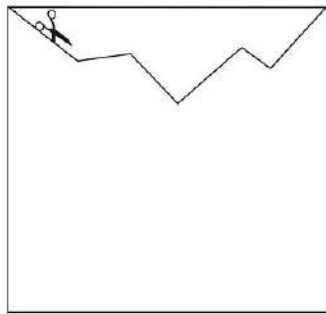
[The Mathematical Art Of MC Escher](#)

[How to make a Tessellation - step by step tutorial](#) - Mrs. Otter Art Studio

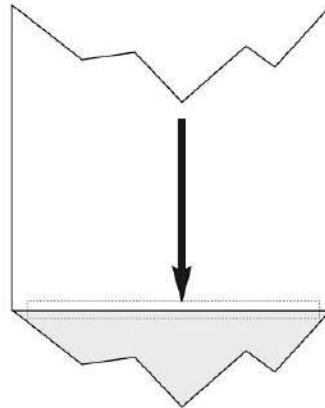
[How to Make a Tessellation - Tips and Tricks](#) - Mrs. Otter Art Studio



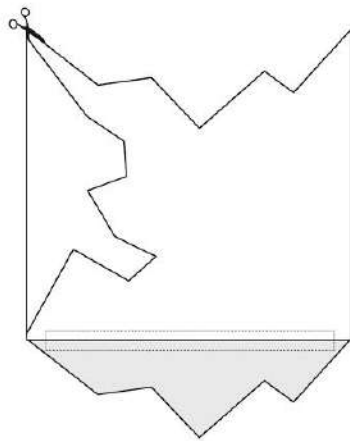
TESSELLATIONS – Translating a section of a square to create an irregular shape that will tessellate.



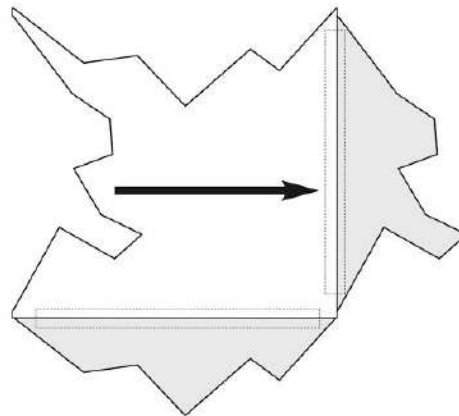
1. Start with a 5 cm (2") square of heavy weight paper. Cut out a section of the square. Start at one vertex and end at the vertex beside it.



2. Translate the shape by **sliding** it to the opposite side of the square. Tape the shape to the square being sure to fit it right up against the edge of the square.



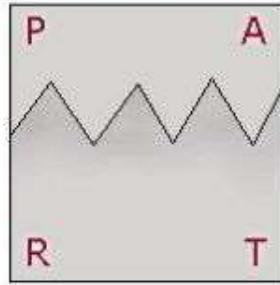
3. Cut out a new shape from the straight side of the square.



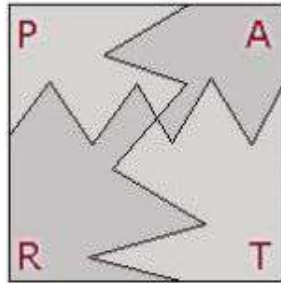
4. Slide it across to the other side and tape it in place.



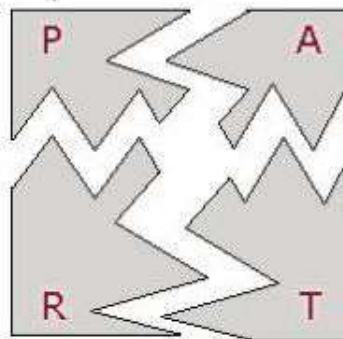
1.
Write
"PART"
in the
corners
like this.



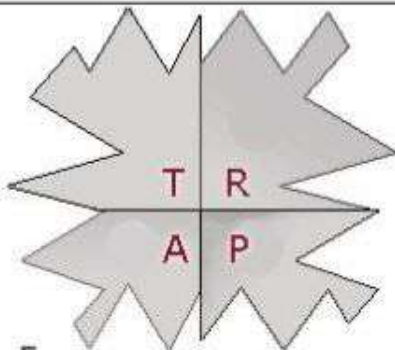
2.
Draw a random
line on the paper
left-to-right.



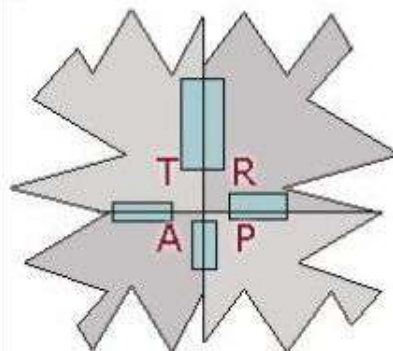
3.
Draw a second
random line
on the paper
top-to-bottom.



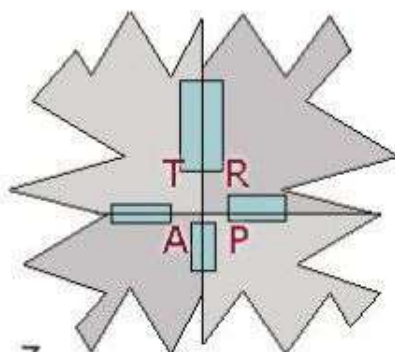
4.
Cut out
your shapes
on the lines
you drew.



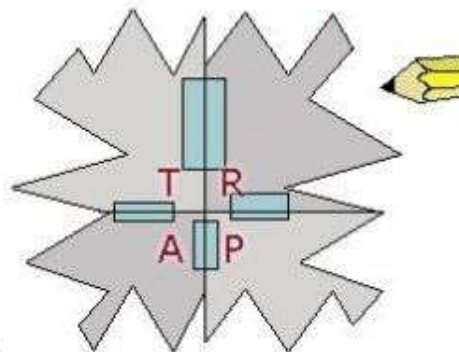
5.
Put the pieces together
so corners are in the middle
and they spell "TRAP" like this.



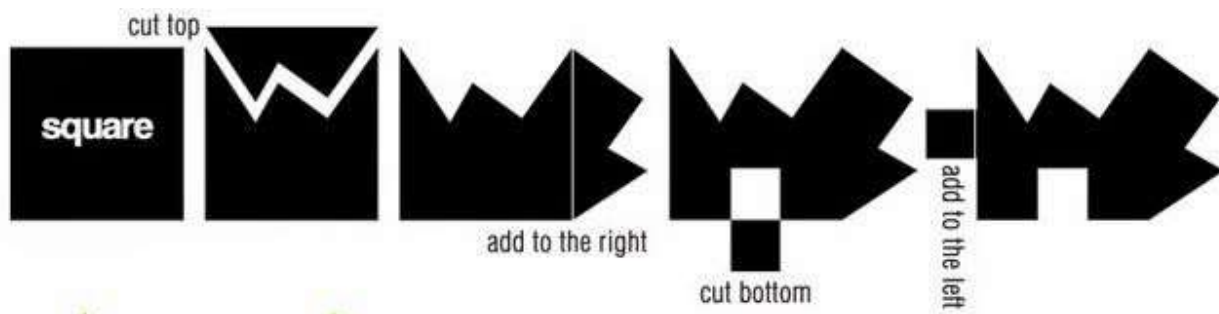
6.
Tape the pieces together.



7.
Decide what the heck it looks like.



8.
Start tracing with your stencil.



Rotation Tessellation

