

Art at home!

Elements of Art: Shape

Activity: Tessellations

"Filling two-dimensional planes has become a real mania to which I have become addicted and from which I sometimes find it hard to tear myself away." ~M. C. Escher

Have you ever heard of the stereotype that all artists are bad at math? Well, that's completely false. Mathematics involve more than just equations; they involve patterns and geometry as well. From graphic designers, to painters, to architects — shapes are important.

Shape is one of the seven elements of art. Shapes can be two-dimensional — something drawn on a surface to look like a three-dimensional object, like a house. Shapes can also be three-dimensional, like we see in sculptures and architecture. Space is an element of art that helps define shape. Space can be two- or three-dimensional, positive or negative. Positive space refers to the main subject. Negative space refers to the space not filled by the main subject; for example, the background.

The graphic artist M. C. Escher drew repeating shapes to make interesting patterns known as tessellations. A tessellation happens when a geometric shape is repeated over and over, interlocking with no gaps or overlaying. An example of a tessellation is Escher's "Sky and Water and Reptiles" (1943). The use of tessellations can be traced back thousands of years. In architecture, there are plenty of real-world examples of tessellations:

The Louvre Pyramid, Paris

The British Museum (Ceiling), London

Taj Mahal (Archway), India

Materials:

- Paper.
- Pencil.
- Tape.
- Sticky note or note card.
- Pen.
- Colored pencils or markers.
- Scissors.

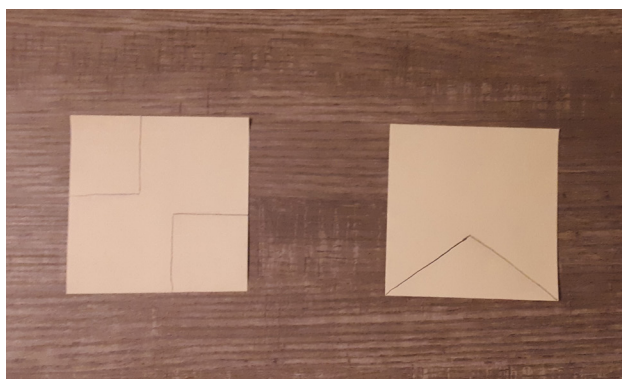
Safety: be careful with scissors.



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Gather your materials.



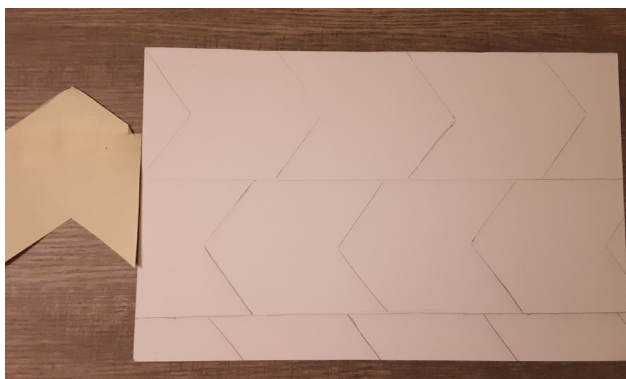
Draw a shape or random line on the sticky note or note card.



Cut out part of the shape you drew, and transfer it to a different side of your sticky note or note card.



Tape the two pieces together. You now have a new shape you can use to make a tessellation! You can make more than one shape to use for your tessellation.



Place your shape into the corner of your paper and trace it accurately. Continue tracing your shape repeatedly until the whole page is covered. Make sure the shapes interlock with each other when tracing, like a jigsaw puzzle.



Color your tessellation!

Additional Links:

- <https://www.widewalls.ch/tessellation-mathematics-method-art/>
- <https://www.thoughtco.com/definition-of-shape-in-art-182463>
- <https://mcescher.com/gallery/symmetry/>
- Elements of Art Video: <https://drive.google.com/file/d/1OW7YQYtUfhkhIDbkRt27wCg0QhGphcil/view?usp=sharing>