Tiling
a springboard for geometry

Henri Picciotto
www.MathEducation.page
henri@MathEducation.page
blog.MathEducation.page
Twitter: @hpicciotto

Tiling the plane (tessellation) provides a rich context for basic and transformational geometry in middle and high school. It provides opportunities for students to do creative work they take pride in, and connects with art (e.g. Escher) and culture (e.g. Islamic design).

Links

This talk is largely based on these two blog posts:
   https://blog.mathed.page/2020/11/16/tiling
   https://blog.mathed.page/2020/12/29/tiling-and-transformations
and Chapter 7 of my freely downloadable book *Geometry Labs*:
   https://www.mathed.page/geometry-labs

Triangle paper: https://www.mathed.page/space/triangle-paper.pdf

The drawing template can be purchased from Nasco:
   https://www.enasco.com/p/Geometry-Labs-Drawing-Template%2BTB18872

The GeoGebra introduction to transformations is here:
   https://www.mathed.page/transformations/isometries

You can find more tilings to analyze by searching online for Escher and/or Islamic designs.
See also my pattern blocks Wallpapers Catalog:
   https://www.mathed.page/manipulatives/pattern-blocks/wallpapers

I share more tiling links on my website:
   https://www.mathed.page/tiling.html

Finally, here are some links to related material:
   https://www.mathed.page/symmetry
   https://www.mathed.page/transformations
   https://www.mathed.page/manipulatives/pattern-blocks
   https://www.mathed.page/puzzles/puzzles.html