

The Art of Math: Tessellations

Objectives:

The students will explore geometric pattern, and symmetry by creating tessellations.

Materials:

- Card Stock Shapes (squares, triangles, and hexagons)
- Paper
- Pencil
- Crayons or Colored Pencils
- Tape
- Scissors

Directions:

1. Explain that a tessellation is a combination of one or more shapes such that, when repeated, the pattern covers a surface without leaving any gaps or overlays. Shapes that fit together in this way are said to tessellate.
2. Have the students examine sample tessellation patterns and try to figure out what the component shape(s) are.
3. Provide the students with sample shapes and have them create different tessellations/patterns from them.
4. Ask the students to identify where we see examples of tessellations in our everyday lives.
5. Have the student select a shape for the creation of a tessellation art project.
6. Provide the student with the selected shape.
7. Ask the students to modify one or two edges of the shape to create a unique pattern, and then cut out the pattern.
8. Have the student trace the pattern onto each side of the selected shape, and cut out the template.
9. Have the student trace the template onto another sheet of paper to create a tessellation.
10. Have the students create and color their own original tessellation art.

PA Standards:

- 2.9.5.G Create and original tessellation.
- 2.9.5.K Analyze simple transformations of geometric figures and rotations of line segments.
- 2.9.5.L Identify properties of geometric figures (e.g., parallel, perpendicular, similar, congruent, symmetrical).

References: