



5 Lesson Five

Mosaic Math

Enduring Understanding

Mosaic designs use symmetry, shapes, and angles to create patterns. Mosaics are a means of decoration and storytelling.

Essential Questions

What can the imagery depicted in mosaics tell us about life in ancient Roman culture? How is symmetry used in mosaics?

What Students Will Learn

- Mosaics serve the function of communication and storytelling.
- Mosaics are designed with symmetry.
- Mosaics are often the most intact portion of an archeological site and provide historical information about the Roman people.

What Students Will Do

- Identify lines of symmetry (reflection, rotation, translation and glide).
- Research and create their own mosaic design.

Assessment

Students will complete a project-based assessment showing understanding through the creation of a finished mosaic.

SUBJECTS: art, math, social studies

CCSS: Geometry (2.G.A.1, 4.G.3, 7.G.B.6, 8.G.A.2, HSG.CO.A.4 & 5)

SKILLS:

- **Bloom's Taxonomy:** evaluation, synthesis, analysis
- **Facets of Understanding:** interpretation, application

DURATION: 45-60 minutes

CLASS SIZE: individuals or teams

Materials

For Each Student

- "Creating a Line of Symmetry" (page 74)
- Describe a Roman Mosaic" (page 75)
- Design a Mosaic" (page 76)

The materials used for this project can vary from simple to elaborate. This depends on access to materials, classroom time for the project, and resources in your community. Below are options for your classroom. Consider thinking outside the box and resourcing materials locally such as tile remnants from tile setting, stone and pebble collecting, etc. Consider making it a small group activity. One person can create the base and grid, one can cut out all the tiles and another draw out the design. Everyone can work together to stick the tiles to the base.

Describe a Roman Mosaic

Imagine you are an archaeologist and have just uncovered a Roman mosaic from Pompeii. You call a museum to tell them about your amazing discovery!



Describe the design and pattern above in words so someone else will be able to draw the design back at the museum. The museum would like to recreate the floor mosaic as part of an exhibit. Describe the design using shapes, symmetry, and angles.
