



LESSON PLAN

2023-2024

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Grade Level: 4th Grade Standard FOCUS (applicable to 4-12 grades with appropriate adjustments)

Big Idea/Title of Lesson: Symmetry through Middle Eastern Painted Paper Floral Tiles

Date: 2024 **Duration:** 3/60-minute sessions

Objective: After learning about Middle Eastern tile examples, students will create painted paper tiles with various Middle Eastern national flowers to demonstrate their understanding of symmetry.

State Standards Being Addressed

Mathematics Standard:

4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Essential Questions:

- What are the characteristics of Middle Eastern arabesque design?
- How can symmetry and repetition be used in art to create visual interest?
- What roles do organic and geometric shapes play in Middle Eastern tile design?

Materials:

White construction paper (10x10, one per student), document camera, tempera paint (various colors), paintbrushes, water cups, stencil template (see attached, one per student), scissors, fine-tipped black sharpies, pencils, symmetry match cards (images cut in $\frac{1}{2}$, enough for a class set of one per student), *“Crescent Moons and Pointed Minarets”* book by Hena Khan, and examples for projection.

Vocabulary:

Symmetry – when an object looks exactly the same on both sides across a dividing line.
Arabesque – a style of decoration that uses patterns of lines that cross over each other that tend to include natural objects (flowers, leaves, branches, fruit, etc.)

Lesson Plan Design:

DAY 1

A. Anticipatory Set / Activation of Prior Knowledge/Kinesthetic Activity:

Match the Half: students will be given $\frac{1}{2}$ an image (can be simple objects or images cut from magazines but must show example of symmetry) and will have to find their partner with the matching half without talking. Teacher will ask partners to discuss what symmetry means to them (have they heard that word before? Do they know what that word means? If not, try to guess what they think it means based on the activity they just completed). Teacher will call on volunteers to share their thinking aloud.

B. Teaching the Lesson:

Teacher will begin by showing parts of the book titled, *“Crescent Moons and Pointed Minarets: A Muslim Book of Shapes”* by Hena Khan that show shapes and tiles that will be relevant to this project.

After introducing Khan's book, teacher will project examples of Middle Eastern tile work and architecture. Teacher will introduce vocabulary words "symmetry" and "arabesque". Artist will ask partners to think-pair-share "how does Middle Eastern architecture use Arabesque design?" and "Talk about organic and geometric shapes you see in Arabesque patterns". Artist will ask volunteers to share thinking aloud.

Next, teacher will model how to fold 10x10 piece of paper vertically, horizontally, and diagonally, ensuring all corners and sides are folded.

Students will then select 1-2 organic shapes (national flowers of the Middle East) and 2-3 geometric shapes for their tiles. Teacher will pass out cardstock stencils (see attached) for students to cut out their chosen shapes. Once cut, students will work on one shape at a time, tracing each shape along one side of a folded line that will later translate into their symmetrical designs.

***Recommendation:** use a protractor for precise positioning, ensuring a radial placement

C. Closure / Concluding the Lesson:

Teacher will ask students to think of an example of symmetry they see in ever day life and share that idea with a neighbor. Teacher will call on volunteers to share thinking aloud as time permits.

DAY 2

A. Anticipatory Set / Activation of Prior Knowledge/Kinesthetic Activity:

Mirror Mirror: students will get toe-to-toe with a partner. Teacher will ask students to choose who will go first. The first designated student will choose a body pose that the other partner must copy to show symmetry across a dividing line. Partners will continue to make different poses for the other to copy as time allows. Teacher may also give students an additional challenge by asking them to make them more angular/geometric or curvy/organic poses.

B. Teaching the Lesson:

Teacher will ask students to recall important information or process from previous session and whisper these to a neighbor. Teacher will then call on volunteers to share thinking aloud.

Teacher will begin instruction by discussing the role color plays in Middle Eastern tile design (for example: color in the Middle Eastern tile design reflects the region's cultural heritage and historical influences).

Teacher will then move on to model how to add paint to their traced shapes (from previous session). Teacher will demonstrate how to fold in accordance with the folded line it is on in order to transfer paint across line of symmetry to form flowers and shapes. Note that each geometric and organic shape should be assigned its own color.

During the painting process, students should work with one shape at a time, ensuring they apply enough paint onto their brushes. They should fill each shape completely and fold the paper accordingly. Emphasize the importance of folding in the direction of each line. Students will continue process for the rest of the session until painting portion is complete.

NOTE: Students will have a tendency to "hammer/smash" on the fold with their fists. Emphasize that they only need to rub firmly onto the area they are creating their symmetrical print.

C. Closure / Concluding the Lesson:

Teacher will ask students to explain why they chose specific colors for each shape on their tile ("Did you have a specific reason for each color choice?") and share with a neighbor. Teacher will call on volunteers to share thinking aloud as time permits.

DAY 3

A. Anticipatory Set / Activation of Prior Knowledge/Kinesthetic Activity:

Symmetrical Dance Freeze: teacher will turn on music and ask students to walk/dance (safely!) throughout the room until the music stops. When the music stops, they must find the closest partner to them and create a partner dance freeze that demonstrates symmetry. Teacher will continue playing music/stopping music for various rounds to ensure students get many opportunities to switch partners and demonstrate understanding of symmetry.

B. Teaching the Lesson:

Teacher will begin by projecting additional tile designs and discuss how line types of Middle Eastern tile designs often carry symbolic significance.

Teacher will then demonstrate how to apply illustration of flowers using cardstock stencils and additional lines/Zentangles/details using fine-tipped sharpies. Students will continue working until tilework is complete.

C. Closure / Concluding the Lesson:

A Star and a Wish: teacher will ask students to share 1 star (something positive) and one wish (something they could change) about their artwork with the neighbor closest to them. Teacher will call on volunteers to share thinking aloud as time permits.

Last Updated: 4.7.24



