

Lesson Summary

- Observe geometric concepts from Navajo
- Explore the process of Navajo rug weaving through creative movement.
- Create movement sequences inspired by geometry found in Navajo rugs.

Lesson Plan and Procedure

We invite teachers to explore geometric concepts with their students through connecting with the Navajo culture and the process of Navajo rug weaving. Access the slide presentation to begin your adventure. This slide presentation is not a one-time lesson. It can be used several times in unique ways.



Lesson Key Facts

- Grade(s): K, 1, 2, 3, 4, 5, 6
- Subject(s): Dance, Math, Social Studies, Native American
- Duration of lesson: 30 minutes
- Author(s); Rachel Marie Kimball

Before beginning the lesson or unit, identify which geometric concept to focus on. Use every slide or pick and choose what you would like to do with your students.

Learning Objectives

- · Identify geometric shapes and their defining attributes, including angles and rules of symmetry.
- · Move in and out of formations in the shared space, using a variety of locomotor and axial motions.

Utah State Board of Education Standards

This lesson can be used to meet standards in many grades and subject areas. We will highlight one grade's standards to give an example of application.

Grade 4 Dance

- Standard 4.D.CR.2: Identify ideas for choreography generated from a variety of stimuli to solve given movement problems.
- Standard 4.D.P.1: Establish spatial relationships with other dancers while safely using levels, directions, focus, and pathway designs in near-, mid-, and far range movement.
- Standard 4.D.P.4: Demonstrate fundamental dance skills through locomotor and nonlocomotor sequences.
- Standard 4.D.R.1: Use basic dance terminology to describe patterns of movement that create a style or theme.

• Standard 4.D.CO.4: Select and describe movements in a specific genre or style, and explain how the movements relate to the culture, society, historical period, or community from which the dance originated.

Grade 4 Mathematics

- Geometry (4.G.): Draw and identify lines and angles, as well as classify shapes by properties of their lines and angles (Standards 4.G.1-3)
- Standard 4.G.1: Draw points, lines, line segments, rays, angles (right, acute, and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Standard 4.G.2: Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- Standard 4.G.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.

Grade 4 Social Studies

- Standard 2
 - Objective 1
 - b. Explore points of view about life in Utah from a variety of cultural groups using primary source documents.
 - c. Explore cultural influences from various groups found in Utah today (e.g. food, music, religion, dress, festivals).

Equipment and Materials Needed

- Navajo Rug Geometry slide presentation
- Possible Diné Music to Dance With:
 - Radmilla Cody and Herman Cody: Niha'a'lyaa / A Gift to Us
 - Radmilla Cody: Corn Grinding Song
 - Radmilla Cody: Shi Naasha'
 - Radmilla Cody: Grandmother
 - Kansas K. Begaye: NAC Song
 - Talibah Begay: Family Path Song
 - Talibah Begay: Corn Pollen Path
 - Talibah Begay: Family Song
 - Sharon Burch: Cradle Song
 - Sharon Burch: Earth Child
 - Sharon Burch: Wee Play
- Navajo Weaver Videos
 - Michele Reyes

Additional Resources

This lesson was created thanks to a grant from the National Endowment for the Arts and the Utah Division of Arts & Museums.

- Navajo Nation website
- Additional rug images and weaving information from Nizhoni Ranch Gallery https://www.navajorug.com

Image References

Image 1: Nizhoni Ranch Gallery, used with permission

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https://education.byu.edu/arts/lessons/Navajo-Rug-Geometry