

## **Culturally Responsive Social Studies Lesson Plan**

**Subject area:** Social Studies and Geometry

**Group:** Grades K-4

**Objectives:**

The students will:

- Identify and compare symbols and shapes common to their lives.
- Identify patterns found on textiles from Africa & Native American cultures and will compare the shapes and regions and symbols used in the textiles with those found in their classroom.
- Identify geographic regions and estimate distance from their home.
- Ask questions about patterns and symbols (from cultural and mathematical perspectives).

**Cultural Context/Advance Organizer:**

Describe and discuss the history of weaving in West Africa or the history of Navajo rugs.

**Lesson:**

Teacher discusses, draws, and describes the features of shapes (square, circle, rectangle, triangle).

**Guided Practice:**

Activity 1

- Students engage in a scavenger hunt in the classroom locating, drawing, and writing down the mathematical name for the shapes/objects found on an index card.
- Students reassemble in groups of 4-6
- Students sort the index card into categories by shape.
- The group orally compares and contrast similarities/differences of shapes in each category.
- Each group describes each shape by its properties to the class.
- Students then identify places in the classroom where patterns are formed based on the shapes discussed and described.

Activity 2

- Teacher shows several examples of Navajo and Kente cloth.
- Groups of 4-6 describe their example to the class identifying the shapes and patterns they see.
- Students then identify cultural groups that may have used these pieces of cloth and explain the usage of the patterns and shapes.

### Activity 3

- Students identify several shapes and patterns in the classroom that are used to represent something. ex. Circle on the poster = sun Square and triangle = house and roof.
- Teacher notes that shapes are called symbols. Cultural groups use symbols in art or fabric to tell a story or give a message

### **Independent Practice:**

- Students are given sample pieces of cloth.
- Students will write and draw the mathematical names and properties of each shape. Patterns are to be identified as well.
- The student is to write the name of the cultural group that best represents the piece of cloth and its purpose.

### **Modifications:**

Working in teams (peer tutors), manipulatives, visual organizers, tactile representations

### **Evaluation:**

Criteria: identifying correct shapes and properties, repeated patterns, purposes in culture, school, home, and community.

### **Homework:**

The student is to identify a picture or example of a cultural use of shapes or patterns at home. Bring it to class. Be prepared to identify and discuss the shapes and patterns to the class. Identify a symbol between home and school. Bring in a drawing of the symbol and an explanation of its meaning.

### **Closing:**

Ask students:

- What geometric shapes are typically used in fabric, textile, and art?
- What are the characteristics of each shape?
- What cultural groups are known to use geometric shapes?
- Which particular shapes are commonly found in the works of the Navajo and Africa?
- Why are symbols used in the creation of fabric and art work?
- Where in your home, community, and school do you find these geometric shapes?
- What are they used for and why?

### **Resources:**

Examples of Navajo and Kente cloth patterns, reading material on history of weaving, index cards, chart paper, examples of common symbols and shapes, African and Native American children's stories (optional)

**Extension Activities:**

- Use felt, paint, or colored pasta to draw and design patterns, pictures and objects commonly seen at school, home, and in the community.
- Class construction of a quilt or t-shirts using the geometric shapes.
- Write a message or story using the geometric shapes.
- Research other cultural fabrics and art work
- Use technology
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**Additional Math Concepts:**

- Finding perimeter and area of squares, rectangles, and triangles
- Symmetry
- Similarity of polygons
- Tessellations
- Patterns

Source: Irvine, J. J., & Armento, B. (Eds.). (2001). Culturally responsive teaching: Lesson planning for elementary and middle grades. Boston, MA: McGraw-Hill.