

## **Lesson Plan Format**

Student Teacher Emma Tutino \_\_\_\_\_ Date 2/22/10  
Grade Level 4 \_\_\_\_\_ Subject History \_\_\_\_\_ Supervisor Mrs. Forrer  
PRELIMINARY PLANNING

### PA Standards:

#### 2.8.4 Algebra and Functions

C. Recognize, describe, extend, create, replicate, and make generalizations for a variety of patterns, sequences, and relationships verbally and numerically.

#### 2.9.4 Geometry

A. Identify, describe, and define 1, 2, and 3 dimensional shapes and their related parts; compare 2-dimensional shapes, compare 3-dimensional shapes.

1. Identify, classify, and/or compare 2-dimensional figures

#### 8.3.4 United States history

B. Locate historical documents, artifacts, and places critical to United States history.

D. Distinguish between conflict and cooperation among groups and organization that impacted the history and development of the United States.

- Ethnicity and race

- Working conditions

#### 9.2.4 Historical and Cultural Contexts

K. Identify, explain, and analyze traditions as they relate to works in arts.

### Pre-assessment:

Students have been discussing patterns and shapes in math class. In history, students have been learning about the Civil War and the Underground Railroad.

### Objectives:

Students will be able to:

- Examine how geometric shapes turn, flip, and slide to create patterns
- Identify and use key mathematical terms when discussing quilt patterns
- Design a quilt top using slides, flips, and turns
- Analyze the role quilts might have played in helping slaves escape to freedom
- Examine the role of math in the creation of arts and crafts

### Individual Modifications:

This lesson will be helpful for those students who have attention problems because they will be able to move around and make a project. I will also be walking around the room to ask questions to help focus the students.

### Materials:

- Example quilt pictures
- Six inch squares of multiple colored construction paper or fabric (each student will need at least 12 squares)
- One piece of large paper (plain or construction) for each student
- Glue

- Scissors
- Aunt Harriet's Underground Railroad in the Sky by Faith Ringgold

### LEARNING SEQUENCE

#### INTO

1. Read the story Aunt Harriet's Underground Railroad in the Sky\*. **Ask students what they learned about the Underground Railroad. Ask students if they think quilts were actually used to guide slaves.**
2. Tell students that they will make a class quilt that will hang in the hall. Show examples of slave quilts and give the history of these slave quilts. Explain that slaves made these quilts in order to leave clues to make the journey north.
3. Ask the students to identify the various geometric elements that were used in the quilt patterns (symmetry, parallel, shape names, angles, etc).

#### THROUGH

1. Give each student's 6-inch squares of multiple colored construction paper, glue, and a large piece of paper.
2. Tell students that they are to use the small squares to design a patchwork quilt top. Explain that the quilt top will contain a map that will show how to "escape" from the classroom to the front door of the school.
3. Ask students to cut the construction paper squares into shapes such as squares, triangles, rectangles, and other shapes. Explain to students that they will slide, flip, and turn these pieces to create the pattern of the escape route.\*
4. Inform students that they will be assessed on their ability to follow direction and explain their design to the class. Students need to involve different shapes in their design. Also, students should be creative and not copy the examples of actual slave quilts.

#### BEYOND

1. Provide time for students to share their quilt tops with the class and explain how they manipulated the geometric shapes to create the pattern of the escape route.\*
2. Collect the quilts and assess if the student followed the directions given for the quilt.
3. Create a class quilt to hang in the hallway or classroom.

### POST INSTRUCTIONAL PLANNING

1. What levels of thinking (Bloom) did your lesson incorporate?  
Students are using application because they must create a model of a slave quilt. The students are taking what they learned in history about the Underground Railroad to finding an escape route from the school. In addition, students are using knowledge because they need to recall the information about math (shapes, patterns) to build their quilt and describe what it symbolizes. The students are using synthesis to design their quilts. They are applying examples of slave quilts to creating their own quilt.
2. How did you evaluate your students' performance?

I was able to evaluate their performance based on what they designed. The students should be able to follow directions and create a quilt using various shapes. Also, students must be able to explain their quilt to the class using math vocabulary. I will be walking around the classroom as well in order to engage the students and ask them questions about what they are doing.

3. In what ways have you included safeguards that all children will learn including second language learners and special needs students?

There is a vocabulary wall for all students; therefore, if they forget a math term they can find it on the wall. Also, this lesson is good for the students with attention problems because this is a hands-on activity. I will also be around the room asking questions to students to make sure they understand what they are doing. Furthermore, if students need examples, I have made cards with examples of quilts.

4. Total Participation Techniques: How did you make sure all students were engaged in your lesson? Mark high-engagement strategies with an asterisk.

Students will be engaged because I am first reading to them and asking questions. Then the students are creating their own quilt and explaining it to the class.

5. Describe the instructional modes that you used in each of your activities (VAKT). Vary these in each lesson.

Visual- Students will be able to look at the pictures while I read the book.

Furthermore, I have provided examples for the students to look at of quilts.

Auditory- Students will listen to me read the story.

Kinesthetic- Students are allowed to get up to view pictures. Also, if they feel more comfortable creating the quilt while standing students are allowed to stand by their desks.

Tactile- In this lesson, students are creating their own quilt. They are able to cut and put together the construction paper shapes any way they want.

6. Describe the changes you would make if you taught this lesson again.

#### Works Cited

“Math Quilts”. Educational Resource. Cooper-Hewitt National Design Museum. 29 September 2006. Smithsonian Cooper- Hewitt National Design Museum. 7 February 2010. <[http://www.educatorresourcecenter.org/view\\_lesson.aspx?lesson\\_plan\\_id=253](http://www.educatorresourcecenter.org/view_lesson.aspx?lesson_plan_id=253)>.

“American Civil War: Slave Quilt Exhibit”. National Cryptologic Museum. 12 February 2010. National Cryptologic Museum. 7 February 2010. <[http://www.nsa.gov/about/cryptologic\\_heritage/museum/](http://www.nsa.gov/about/cryptologic_heritage/museum/)>.

Ringgold, Faith. Aunt Harriet’s Underground Railroad in the Sky. Crown Publishers. New York: 1992.