

Algebra/Geometry Institute Summer 2006



Lesson Plan I: CCJHS Annual Fashion Day

Faculty Name: *Tanya S. Castal*

School: Coahoma County Junior High School Clarksdale, MS

Grade Level: 8th

1 Teaching Objective(s)

Mississippi Mathematics Framework 2000-2005

The student will revisit:

- 5a. convert, perform basic operations, and solve word problems using standard measurements.
- 5b. measure line segments and find dimensions of given figures using standard measurements.

The student will:

- 6b. identify and describe characteristics of polygons
- 6c. find the perimeter and area of polygons
- 6d. classify, draw, and measure acute, obtuse, right, and straight angles.

2 Instructional Activities

Once students enter the classroom, they will find in the upper right hand corner of the chalkboard or the erase board (or some may use an overhead projector) labeled DO NOW! The DO NOW! activity serves as a warm-up exercise, which helps get the students in a “thinking” mind set. DO NOW! activities are generally two-four problems derived from the previous lesson/objective. (NOTE: the DO NOW! for this lesson refreshes students on converting standard measurements). **See Attachment 1**

After students complete the DO NOW!, the teacher will work the problems or select two or three students to work the problems on the chalkboard. Teacher observation of the class is done to see if any questions arise or any concerns appear on the students’ faces.

The teacher will now introduce the following vocabulary words: *polygon, quadrilateral, trapezoid, rectangle, square, triangle, right triangle, acute triangle, isosceles triangle, obtuse triangle, scalene triangle, equilateral triangle, and equiangular triangle*. Using index cards, students will produce vocabulary cards. After completing the vocabulary cards, students will then construct a holder in which the cards will be placed and turned in for grading.

To create vocabulary cards, students will

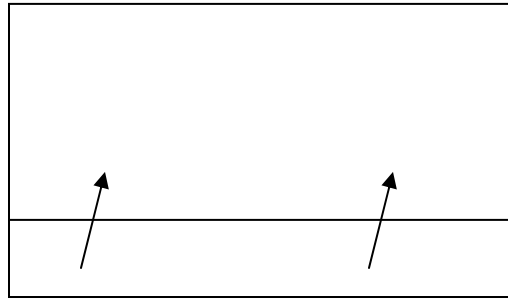
Side I

Vocabulary word

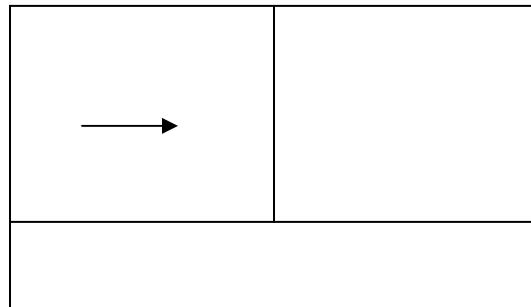
Side II

Definition
Picture/Image

To create the vocabulary card holder, students will take a piece of construction paper and do a hot dog fold approximately one-fourth from the bottom of the paper.



Then fold the construction paper in half from left to right.



After the vocabulary cards are graded, returned to students and discussed; the teacher states, “We will now engage in a group activity. This year our Math department will have a mock fashion day. After I select students to form a group, you will participate in this event, which combines what you know about standard measurements and have learned about recognizing polygons. You are going to take this knowledge and produce clothing pieces for the fashion show. You will be creators of your own fashion line, so you will be responsible for creating a name for your designs. Your designs will include a shirt and a pair of pants or skirt. These articles can only be made out of quadrilaterals. You must also select two pieces of costume jewelry (a necklace, bracelet or earrings), which can only be created out of triangles. You will need to find the perimeter and area of your designs because fabric will be limited.”

The teacher will then pass out the Group Measurement Chart (**See Attachment 2**). This sheet will be used by the group to record their measurements.

After group members are selected, the teacher will assign him/her a specific role to complete.

Supervisor: this student is the team leader. S/he is the overseer of the project. S/he is responsible for making sure each member participates and is on task. S/he is the only one that reports to the teacher.

Recorder: this student is responsible for taking all notes, measurements and/or writing outlines created by the group. S/he is responsible for correct calculations. S/he reports only to the Supervisor.

Measurer/Seamstress: this student is responsible for measuring the model. S/he is responsible for the creation of the clothing and jewelry. S/he will use the stapler to “sew” the fabric together. S/he reports only to the Supervisor and the Recorder.

Model: this student is responsible for wearing the finished product. S/he assists the Recorder and the Measurer.

Groups will have two-three days to complete this activity. Both the Measurement Chart and the final clothing piece are due on Day 3. (The teacher makes copies of the completed chart for the remaining groups to be used on Day 4). On Day 4 the Fashion Show begins. The group’s model will change into the clothing piece with jewelry. The teacher passes copies of the Measurement Chart to the Recorder, who will in turn pass out to the remaining groups. The remaining groups have five to ten minutes to observe the creation and check its measurements with their rulers. They are to define the types of quadrilaterals and triangles used, and if there are any errors found, a discussion will take place. The winner of the Fashion Show will have their groups’ picture with the design placed in the newspaper.

3 Materials and Resources

- **Chalk/chalkboard**
- **Student portfolio (includes notes)**
- **Index cards**
- **Pen/pencil**
- **Stapler/staples**
- **Ruler**
- **Tape or glue**
- **Paper clips**
- **Scissors**
- **Glitter**
- **Markers**
- **Yarn/ribbon**
- **Construction paper**
- **fabric**

4 Assessment

- **DO NOW! Activity**
- **Vocabulary cards with booklet**
- **Group participation/teacher observation**
- **Fashion Design**
- **Graded Measurement Chart**

DO NOW! ACTIVITY

Convert the following:

1. _____ inches = $2 \frac{1}{3}$ yards
2. _____ ounces = $5 \frac{2}{3}$ pounds
3. The Cleveland Marathon is a fifteen (15) mile run that occurs every June 15th. This year Khylan wants to participate in the marathon. If it took him 90 minutes to run one and one-half mile, how long will it take Khylan to complete the marathon in minutes? In seconds?

Attachment 2

Group # _____ Student Names: _____

Fashion Day Measurement Chart

Name of Article	Type of Polygon Observed	Type of Triangle Observed	Clothing Measurement *Show work for conversion Yards to Inches	Jewelry Measurement *Show work for conversion Inches to CM
Shirt			Perimeter: Area:	Perimeter: Area:
Skirt			Perimeter: Area:	Perimeter: Area:
Pants			Perimeter: Area:	Perimeter: Area:
Bracelet			Perimeter: Area:	Perimeter: Area:
Necklace			Perimeter: Area:	Perimeter: Area:
Earrings			Perimeter: Area:	Perimeter: Area:

***If additional paper is used, attach to the back of this sheet.**

Comments:
