Algebra/Geometry Institute Summer 2005

Lesson Plan 1: What's the Idea!

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School: West Bolivar Middle School
Grade Level: 6th

1   Teaching objective(s) Mississippi Framework
    #19--Draw points, lines (parallel, perpendicular, and intersecting), line segments, and rays

2   Instructional Activities
    - The teacher will discuss the definition of each geometric idea and draw an example of each on the chalkboard as follows:
        - Point: an exact location (**.**)
        - Ray: has one endpoint and goes on forever in one direction (⟶)
        - Line segment: has two endpoints (⟩)
        - Line : extends on forever in both directions (⟷)
            - Parallel lines: are the same distance apart and run in the same direction (⇔)
            - Perpendicular lines: cross to form right angles (⥉)
            - Intersecting lines: cross at exactly one point (⤧)

    - The teacher will give examples of real-world items that represent each geometric idea. (For example, the sun is an example of a point, from Cleveland to Rosedale is an example of a line segment, Hwy 8 intersecting Hwy 61 form perpendicular lines, from Clarksdale through Memphis represents a ray, the opposite sides of a rectangular shaped rug represent parallel lines, and the symbol on a railroad crossing street sign represents intersecting lines.)

    - The teacher will show the students all the materials, one at a time, which they will need in order to complete the activity and name each item.

    - The teacher will read the following directions to the students:

        You are to use the materials given to you to create each geometric idea that we have just discussed. (Refer to the list on the board.) For example, you may use a cotton ball to represent a point, the popsicle sticks to make the lines or line segments, and string to create an arrow. You will glue each completed figure to the

construction paper. After completing the activity, you will identify each figure by writing the name of the figure below it.

- The teacher will place the students in pairs and then pass out the materials needed to complete the activity to each student. The students should be allowed to share the following items: glue, scissors, and markers.

- After the completion of the activity, some of the students will be allowed to stand before the class with his/her completed project and discuss it.

- Next, the teacher will give the students a handout to complete on drawing and labeling examples of geometric ideas. (Attachment 1) The teacher will monitor the students as they work and have them make corrections, if necessary. (The students should be allowed to work on this activity in pairs, also.)

- The teacher will close the lesson by making comments about the activities and reviewing the geometric terms.

3   Materials and Resources
        Chalkboard/whiteboard
        Construction paper
        Glue
        Popsicle sticks
        Cotton balls
        String
        Scissors
        Markers
        Worksheets
        Textbook: Harcourt Brace & Company; Mathematics Plus; Copyright 1994.

4   Assessment
        Teacher Observation
- The teacher will observe the students as they work to make sure they are completing the activities correctly. The teacher will also ask questions and make comments when necessary.

Name: _____   Date: _____

Geometric Ideas

Draw and label an example of each.

1. intersecting lines AB & BC	2. ray GH	3. line BD
4. line segment FG	5. parallel lines FL & MN	6. point T
7. perpendicular lines MN & PQ	8. line segment VW	9. ray ST
10. parallel lines GG & LM	11. point X	12. line DE
13. intersecting lines CV & DW	14. ray BN	15. perpendicular lines RS & TV
16. line segment XY	17. point B	18. line YZ