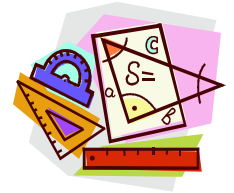




Algebra/Geometry Institute 2007



Felicia G. McKinney
Robert L. Merritt Middle School
6th Grade Math

1. **Teaching Objective:**

Identify, classify, and measure right, acute, obtuse, and straight angles

2. **Materials and Resources**

- ❖ Paper
- ❖ Pencil
- ❖ Toothpicks
- ❖ Gumdrops
- ❖ Markers
- ❖ Glue/Tape
- ❖ Cardstock paper
- ❖ 1 Spinner for each group of students
- ❖ 1 Set of 42 cards per group of students

3. **Instructional Activities:**

- ❖ Instruct students to complete the “Do Now” activity on the board. This is a warm-up to today’s lesson. Discuss after everyone has completed the activity. {Do Now: Draw and label two different types of angles.} (3-5 minutes)
- ❖ Students will write the definition of vocabulary words in their math journals. Vocabulary words are posted on the ‘Word Wall’. After students have written definitions in their math journal, go over the definitions with them. Be sure to point out to the students that right angles always contain a square in the corner, meaning that it is 90° . (10 Minutes)
 - i. Right angle – measures exactly 90°
 - ii. Acute angle – measures less than 90°
 - iii. Line segment – two points on a line, and all the points between those two points
 - iv. Obtuse angle – measures more than 90° but less than 180°
 - v. Straight angle – measures exactly 180°

- ❖ Review any previous lessons on lines or angles. Discuss angles as the geometric figure formed by lines meeting. Show several objects of different kinds of angles. Ask students to find angles around the classroom. (15 minutes)
- ❖ Activity 1: (This activity is teacher created.) After the students have reviewed the different types of angles, they will now play “The Angle Game.” At this time, the teacher will explain the rules of the angle game they will play. “Now that you have reviewed angles, we will play a game about obtuse, acute, right, and straight angles.” Students will be placed in groups of four and will get a spinner that is split into four parts. (See attachment 1.) The four parts are the different types of angles: acute, obtuse, right, and straight. Along with the spinner, each group will get a deck of 42 cards. Out of the 42 cards, two cards are labeled 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90 degrees and six cards are labeled WILD. One student will shuffle the deck of cards and deal 5 cards to each player. The other cards are placed faced down in a pile between players. One player begins by spinning the spinner. Using two cards, the player forms a pair whose sum equals the type of angle spun. Each pair is worth two points. If a pair cannot be formed, the player discards one card and selects another from the facedown pile. If a pair is formed, the player sets aside the two cards and gets 2 points. If a pair cannot be formed, the player loses his/her turn. The player who gets 20 points first wins the game!” (30 minutes)
- ❖ Activity 2: Students will use toothpicks, gumdrops, glue or tape, markers, pencil and paper, and cardstock paper. Students will build and identify each type of angle on cardstock paper and label them. The students will place a gumdrop on the ends of the toothpicks to identify the points. (20 minutes)
- ❖ Students will complete a worksheet on the different types of angles for a daily grade. (See attachment 2.) (15 minutes)

4. Closure:

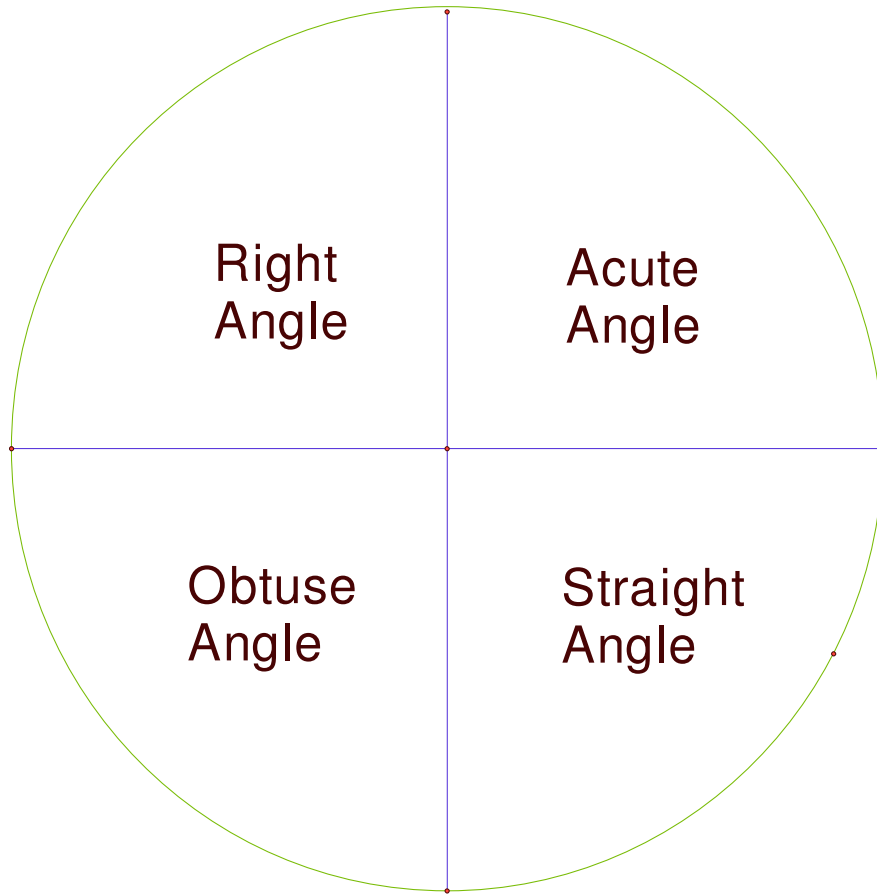
Review the angles the students have identified. Elaborate on what makes a right angle, an acute angle, straight angle, and obtuse angle.

5. Assessment or Evaluation:

Assessment will be ongoing throughout the lesson. Students will be evaluated on their drawings and identifying angles correctly. Teacher will observe the math terminology/language used by students when playing the angle game.

6. Sources:

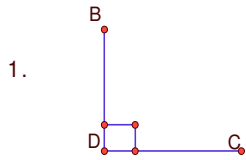
Shapes were constructed through Geometer’s Sketchpad



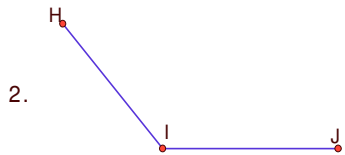
Angles

Name: _____ Date/Section: _____

Match each illustration to its definition.



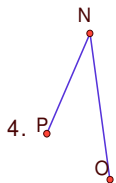
a. Acute Angle: measures less than 90 degrees



b. Right Angle: measures exactly 90 degrees

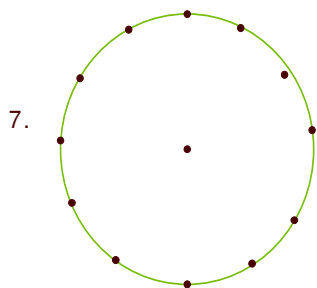


c. Obtuse Angle: measures more than 90 degrees but less than 180 degrees.

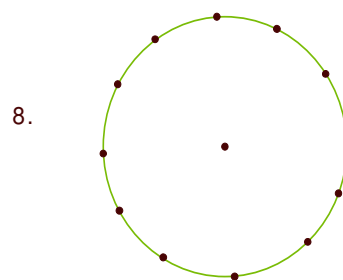


d. Straight Angle: measures exactly 180 degrees

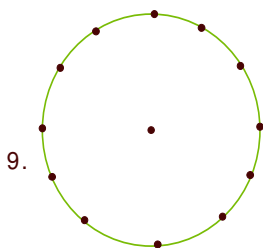
Number the clock and draw hands that will illustrate the kind of angle indicated.



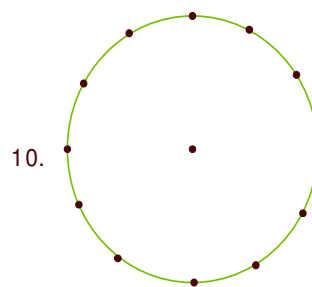
Straight



Obtuse



Right



Acute