Lesson Plan #1—Math
Title: <u>Using Manipulatives to Teach Fractions</u>

Introduction:
Why use manipulatives to teach math? There is a link between *seeing* math and *understanding* math.

Building with manipulatives incorporates the visual, kinesthetic, figurative, and tactile; **Saying** taps into the auditory and semantic; **Writing** teaches the symbolism of math and bridges the concrete and the abstract. The result? When a student sees the numbers on paper (abstract) he or she is able to visualize the concept.

Objectives:
In this lesson, students will:
- Recognize and name fractional amounts.
- Demonstrate equivalent fractions using common items as concrete examples.
- Understand the definition of a fraction.

Session time: 40-50 minutes

Materials:
- A white, blue, pink, and yellow egg carton
- Scissors
- Plastic measuring cups
- Kit Kat or Hershey chocolate bars

Methods: Lecture, cooperative learning, interactive participation

Procedure:

1. Use different color egg cartons to demonstrate fractions. Use 4 egg cartons to find one-half, one-third, and one-fourth of twelve. Show 2 cartons, one white and one blue. Have the student cut the blue carton in 1/2. Place the 2 equal parts (halves) in a white carton. With student watching, remove one part and ask, *"How much of a whole carton is this?"* (Answer: 1/2) Place the 2 halves back into the carton and ask, "How many eggs will a carton hold?" How many eggs will ½ of a carton hold? How much is ½ of 12? Write the following and ask the student to complete:

     ½ of 12 = _____

Display a pink carton and cut it in thirds. Do the same as above and then offer this equation:

1/3 of 12 = _____

Do the same with a yellow egg carton to show fourths.

¼ of 12 = _____

2. Fill a ½-cup measuring cup and empty it into a 1-cup measuring cup. Talk with the student about how much is filled. Repeat and talk about how many ½-cup measuring cups it takes to fill the 1-cup. Repeat the procedure using the ¼-cup and 1/8-cup measuring cups.

3. Use Kit-Kat or Hershey bars for this activity. Discuss how many parts make up a whole candy bar. Break off pieces and discuss what fraction of the candy is broken off and what fraction is remaining. The student can eat the candy when the lesson is complete.

Note: This lesson is included in the workshop, ***Math Manipulatives for the ABE/GED Classroom,*** in the ***SIPDC Catalog of Professional Development Opportunities.***