

Oklahoma Panhandle State University  
Math-Ese Workshop

December 9, 2006

“Mystery Number”

The student will demonstrate their understanding of even, odd, less than, greater than, etc. while guessing the “mystery number”.

Nancy Lines

**Name:** Nancy Lines

**Grade Level/Subject:** 4<sup>th</sup> Grade Math

**Topic:** Using literature to teach number sense

**Objectives:**

The students will identify a “mystery number” by formulating questions to narrow the choices down.

The students will demonstrate an understanding of greater than, less than, even and odd numbers, etc. while asking questions to finding the “mystery number”.

**Objectives (P.A.S.S.)**

Standard 2: Number Sense

2. Compare and order whole numbers

Process Standard 1: Problem Solving

5. Distinguish between necessary & irrelevant information in solving riddles

**Materials:**

Children’s book, *More or Less*, by Stuart J. Murphy, Harper Collins Publishers, ISBN #0-06-053167-3.

**Introduction:**

The lesson will begin with a short, guided discussion about numbers. Discuss briefly how you could describe a number (ie. a number can be even, odd, more than, less than, a multiple, etc.)

Read the children’s book, *More or Less*, by Stuart J. Murphy.

**Instructional Process:**

1. Recall the rules of Eddie’s game. Ask the students how many questions do they think it would take for them to guess a number.
2. Review the questions that he asked when guessing.
3. Divide the students into pairs according to their abilities. Give one student from each pair a number between 1 and 20. Have the student with the number mark how many questions it takes to

- guess the right number. Switch places and let the other student guess a different number.
4. 4. Record on the board the number of questions it took for each student to guess their number. How close were their predictions?
  5. 5. Decide as a group how many questions should it take to guess the "mystery number". Create guidelines for them to follow when they are guessing. For example: 5 questions or less-10 bonus points; 6 to 10 questions-5 bonus points; more than 10 questions-1 bonus point. Candy could also be used.
  6. 6. Give out numbers from 1-40 to be guessed. Be sure the students record the number of questions it takes to find the "mystery number". At this time you could also regroup the students, so they would have different partners.
  7. 7. Discuss and share the different questions used to find the answer.
  8. 8. Change partners again and ask each student to pick a number from 1-60. Again, record the number of questions it takes to find the number.

**Closure:**

Ask the students what information helped the most in finding the "mystery number".

Ask the student to write a number riddle. You may have to do one as a class.

**Assessment:**

The students will be assessed by their class discussion and participation with their partners and by the accuracy of their riddle.

**Modifications:**

Advanced Students: Challenge them to find numbers from a large group of numbers.

Special Needs: Use a smaller set of numbers to choose from and have a set of questions they can pick from to ask.

**Reflections:**

This activity and book were a lot of fun. The book was a great way to ignite the students' interest and motivate them to find ways of getting the "mystery number". They were excited and did quite well guessing the number when they were in pairs. It was easy to see if their sense of numbers was accurate. We ended up doing this activity through Reading and English!!! When we were writing the riddles, my class asked if we could give them to the 5<sup>th</sup> and 6<sup>th</sup> graders. We passed them on. This was a great activity. I would do this again!!!