

Math Lesson

Name: Megann Wenger

School: Abe Lincoln

Grade: 5th

Subject: Math

Date: September 16th, 2012

Students:

The class consists of 24 students, 11 boys' and 13 girls. One student goes to the special ed teacher during this class time for alternate lessons. I have a mix of students in this class. There is a handful that are very well behaved nearly all the time, while I have a few kids who are constantly being asked to pay attention. Then there are some students who just get off task and we have to remind them of their behavior and of what we need to be doing at that moment. Learning styles include visual and kinesthetic, from what I can see thus far. Up to this point, I am finding many students do better on their timed tests when they aren't under pressure to finished as many as possible in a certain amount of time. I do have a couple students with different cultural backgrounds than the rest of the class, but this doesn't seem to affect their learning at all.

Instructional Goals:

- To introduce square numbers and the exponent key on a calculator.

Instruction:

- Warm-up: have students answer random mental math facts from the smart board. They will answer these using their math notebooks. I will have a document open and show them 3 problems at a time, with four sets. This will include addition/subtraction and multiplication/division.
- Math Message- I'll provide dot paper and ask the students try to make 'perfect square' arrays for numbers, 14, 16 and 18.
 - How are these arrays different?
 - Which number(s) make a squared array? (16, 4x4 array) "Can someone draw me this array?"
 - How is a 4x4 array similar to a square? Draw a square next to the array.
 - Explain they have same # of rows as columns; this is called a *squared array*.
- Open to journal page 20. Think to self what they find the squares to have in common? Discuss what these squares have in common.
- Work together on journal page 20.
- If time- find other square numbers.
 - Ask- Can numbers 1, 2, 3 & 4 be drawn in square arrays. Why or why not?
 - 2 & 3 cannot be drawn. Can 1? Advise yes. Ask questions- How many rows/columns. Write the number model ($1 \times 1 = 1$)
- *If time allows, I will start to explain what an exponent is, what it looks like next to a number and exponential notation. This will enable them to start math journal page 21 in their work book. Today or tomorrow I will then show the students what an exponent is on the calculator.

Content Standards:

1. Operations and Algebraic thinking 5.OA
 - a) Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
2. Patterns, Functions, and Algebra Goal 1
 - b) Use array patterns to define square numbers.

Instructional Materials

- Pencil
- Red Pen
- Math Journal
- Math Notebook
- Teacher Edition Math Book/math journal
- Smart Board

Assessment: For assessment I will be checking their journal page 20 as we are completing it in class. I will offer assistance and we will work as a class, but it is still their responsibility to follow along and make sure they understand. I'll watch as volunteers offer to show their work. I have a good idea already of the students who will follow along and finish it and the ones who might fall behind. If there is time, I will have them start Math Journal page 21.