

Making Sense of Place Value!

Date: March 21, 2012

Title: Making Sense of Place Value!

Overall lesson topic: Place Value

Purpose: I will be helping my students understand the difference between the ones and tens digits using their prior knowledge about place value and high level tasks.

Common Core:1.NBT.2: Understand place value. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

- a. 10 can be thought of as a bundle of ten ones — called a “ten.”
- b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
- c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)

Rationale: This topic is important for my students because understanding place value is an essential foundational aspect of math. It helps students to understand numbers on a larger scale such as hundreds, thousands, millions, etc. Understanding place value also helps students to be able to add and subtract larger (2-3 digit) numbers, understand the value of money and write numbers in the correct orientation.

Goals/Objectives for today’s lesson:

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Materials & supplies needed: Number cards, pencil, paper, ones/tens blocks, and counters.

Launch (10 minutes)

The lesson will begin with a quick review of place value based off what the students have already learned about the ones and tens place. Teacher will write numbers on the Smartboard and have students recreate the numbers using ones and tens blocks. Teacher will ask questions to get the students thinking in terms of the goal of the lesson.

- Which place has more blocks in it?
- Which blocks are bigger?
- Why are the blocks in the tens place bigger?
- Why are the blocks in the ones place smaller?

Explain to students that we will hopefully be able to answer all of these questions by the end of the lesson.

Explore (15 minutes)

- Students will be arranged in their table groups where they will work individually
- Students will work in pairs to create one and two digit numbers that they will show in front of the class, using number cards. Students must create the largest and smallest numbers possible with the numbers they are given.

At their desks, all students must write the numbers in the different ways listed below:

- Write numbers in the correct order using the place value chart
- Represent the numbers using a picture
- Draw numbers using tens and ones blocks
- Writing the numbers in expanded form (50+9, 90+5)

Teacher will go over each task in detail to make sure students understand

Academic, Social and Linguistic Support during each event

Students will be given support by being able to work with to create the numbers

Students who are Visually Impaired sit closer to the front of the room so that they can see the more easily.

Teacher will give support by making sure each student stays on task and understands what is expected from them during the lesson.

what they are to do for each box.

Specifically ... (monitoring and supporting students' thinking)

- As students are working, teacher will monitor learning by walking around the room to see how they are writing their numbers. At this point, the teacher's purpose is to monitor, not teach the students to see how they are understanding the task before the class discusses it as a whole.
- Teacher will also monitor the students in front of the class to make sure are correctly creating the small and large numbers. The teacher will ask the class to verify the numbers to see if they agree with what their classmates produce. If there is a disagreement, the numbers will be discussed as a class.

Summarize (30 minutes)

After each pair of students have created numbers, the teacher will redirect the focus of the lesson to the value of the ones and tens place. Students will be able to use their prior knowledge, what they learned from the task, and what they wrote for each number on their papers to make connections during the discussion. The teacher will present the class with two new numbers different than the ones made by the class before and ask them questions related to the numbers in the ones and tens place as indicated in the classroom dialogue. Using the numbers 13 and 31, the teacher will help the students understand the difference in value for the tens and ones place.

Specifically:

- I would like for students to focus more so on the tasks where they use tens and ones blocks to represent the numbers, as well as where they use expanded form. They methods of number writing help to capture the goal of the lesson because it shows the value of each place.
- What specific questions will you ask:
 - Are the 3's in 31 and 13 the same?

<ul style="list-style-type: none"> ▪ Do they represent the same amount? ▪ Which number is bigger? ▪ How do you know which number is bigger? ▪ Can you explain what you mean? ▪ What do you notice about the numbers in the tens place from your worksheets? ▪ What do you notice about the numbers in the ones place from your worksheet? <p>In closure...</p> <ul style="list-style-type: none"> ○ Teacher will explain ask students to explain how they know that there is a difference between the ones and tens place. 	
<p>Assessment Students will be assessed in a number of different ways.</p> <ul style="list-style-type: none"> ○ Through their level of understanding of the task they are presented with and the work the produce ○ Through the responses they make during the whole class discussion 	<p>Same as above</p>