Lesson Plan: Place Value Routine
2nd Grade, Two-Digit Numbers

Grade: 2nd

Standards:

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

a. 100 can be thought of as a bundle of ten tens—called a "hundred."

b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

2.NBT.2 Count within 1000; skip-count by 2s, 5s, 10s, and 100s. CA

2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

Materials needed:

- Math journals/paper
- Base ten blocks
- Whiteboards

Lesson Overview:

- Introductions (3 – 5 min)
- Choral Counting (5 – 7 min)
  - First, we will chorally count aloud from 1 – 22, clapping for each number, when we get to any ten, we will clap above our head. T. When did we clap above our head? Do you notice a pattern with these numbers?
  - Now, we are only going to count by tens. Where will we clap each time we count? Let's try it together stopping at 50. Let's do it again starting at 30 and stopping at 100.
  - T. What are some things that we can count by tens?
  - T. I brought some things with me that we can count by tens. Let's count these (ten frames, dimes, ten dollar bills, ten rods, 100s chart, etc.).
- Number of the Day – What do you know about today's number? (15 – 25 min)
  - Create a two-digit number with student volunteers.
  - Have students build today's number using base ten blocks. Ask 1 student to go build it on the board using the WMP? WMV? pieces.
  - T. What do we know about today's number? Think-pair-share, chart out
  - Say the number as a class.
  - Ask students to write the number. Tell them that when we write the number this way, it is called standard form.
  - Ask students to identify the place values of each digit on the board.

- Next, have the students say the word in slow motion voice as the teacher writes it in word form. Tell them that when we write the number this way, it is called word form.
- Have students look at how they built the number. Tell them that now we are going to make a quick math sketch for this number. This means that we are drawing to help us understand the number and not for an art project, so we draw differently. ☺
- Ask students to look at their drawings. T. How many tens do we have (number of tens)? How many ones do we have? Write it on the board, i.e. 4 tens, 7 ones. What is the value of the tens (total amount)? What is the value of the ones? Model how to write the number in expanded form, i.e. 40 + 7 = 47 and tell the students that this is called expanded form.
- *If there is time:* Identify the placement of today's number on a hundred number chart and/or number line. T. Can you think about 2 numbers that are smaller than today's number? Pair-share T. Can you think about 2 numbers that are larger than today's number? Pair-share

- Class Conversation:
  - What do you notice about how the tens and ones are related? How many ones units are in a ten-rod? How many tens do you think are in 100? Can we check by skip counting?
  - What might be other ways to build this number?
  - Explain to your partner 1 idea that you learned today.
- Partner Practice:
  - Now, I am going to have you work on a new number with your partner while your teacher and I talk about the ideas that you shared.
  - Have two students pull out digit cards to create the new number on the board. Say the new number with the whole class twice and release students to begin partner work.

Anticipated Student Responses:	Possible Teacher Questions:
• Students may struggle to count by tens (It is a Kinder standard, not a 1st grade standard, and it reappears in 2nd grade). • Students may draw today's numbers using dots or including all of the lines in the tens, etc. Sketches may look different throughout the room. • 2nd grade is the first time that word form and expanded form are introduced.	• Show students a filled ten frame. Do you know a fast way to count the number of dots in this ten-frame? • How might we create a quick sketch to show this piece without drawing all of details? Facilitate a conversation to streamline the drawings. • Support students by modeling the new forms and then telling them what they are called afterward (concept, then connect the vocabulary term to it).

Reflection/Observation Questions:

- What are students saying and doing?
- What ideas/strategies did students use?
- What ideas/strategies did students share?
- What are your next steps to continue the learning from this math routine?

Resources:

- *Number Literacy: What's My Place? What's My Value?* by Debby Head and Libby Pollett, http://bbypublications.com/products/number-literacy/
- Illustrative Mathematics, https://www.illustrativemathematics.org/.
- *Number Sense Routines: Building Numerical Literacy Every Day* in Grades K-3 by Jessica F. Shumway.
- Lesson plan created by Christine Roberts, TCOE Mathematics Staff Development and Curriculum Specialist, for Dinuba Unified School District, http://dusd.dinuba.k12.ca.us/.