Next Steps and Instructional Moves

The intended purpose of this document is to provide teachers with a tool to determine student understanding and suggest instructional moves that may help guide a student forward in their learning of a particular concept or standard. This guide is not an exhaustive list of strategies.

Second Grade: Cluster 8 Problem Solving with Money

This list includes standards addressed in this cluster, but not necessarily mastered, since all standards are benchmarks for the end of the year. Note recommendations in the Important Considerations section in Cluster 8 of the Instructional Frameworks for more information.

NC.2.MD.8 Solve word problems involving:
● **Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.**
● **Whole dollar amounts, using the $ symbol appropriately.**

NC.2.OA.1 Represent and solve addition and subtraction word problems, within 100, with unknowns in all positions, by using representations and equations with a symbol for the unknown number to represent the problem, when solving:
● **One-Step problems:**
○ **Add to/Take from - Start Unknown**
○ **Compare - Bigger Unknown**
○ **Compare - Smaller Unknown**

● **Two-Step problems involving single digits:**
○ **Add to/Take from - Change Unknown**
○ **Add to/Take From - Result Unknown**

Not Yet	Students that are consistently scoring "Not Yet" could have a variety of errors. These errors may include not yet being to recognize coins or solve one-step addition and subtraction problems within 50.

Next Steps and Instructional Moves

<u>Next Steps:</u>
For students who are not yet able to recognize coins (2.MD.8):
- Provide students with physical coins and an opportunity to trade coins.

For students who are not yet able to consistently add and subtract within 50 (2.OA.1, 2.MD.8):
- Pose tasks to students that allow them to use base ten blocks to support their work
- Consider the progression of the types of numbers in tasks:
    - two-digit number and a two-digit number that is a multiple of ten (e.g., 36+20 or 36 - 20)
    - two-digit number and a two-digit number where the sum or difference does not require the reorganizing/regrouping of tens and ones (e.g., 36 + 22 or 36 - 22)
    - two-digit number and a two-digit number where the sum or difference require the reorganizing/regrouping of tens and ones (e.g., 36 + 27 or 36 - 27)
- use the hundreds board as a tool to support students' addition and subtraction work

For students who are not yet able to determine whether they should add or subtract numbers in a word problem (2.OA.1, 2.MD.8):
- Have students describe the action in the word problems. Avoid key words and using isolated words to determine which operation to use. Key words are distracting. Example: fewer does not always mean subtract. *Susan has 4 pens. She has 3 fewer pens than Tomika. How many pens does Tomika have?*
- Use strategies such as part-part-whole mats or model drawing to support students' exploration of word problems. Example: There are some birds on the fence. If 15 birds leave and there are 18 birds still there, how many birds were first there?

Birds who left (18)	Birds still there (15)
Birds first there (18+15)	

Progressing	**Students that are consistently scoring "Progressing" may have errors with solving addition and subtraction problems involving money.**

Next Steps and Instructional Moves

<u>Next Steps:</u>
For students who are progressing in solving word problems involving money:
- See comments below on 2.OA.1

For students who are progressing at consistently adding and subtracting within 100 (2.OA.1, 2.MD.8):
- Pose tasks to students that allow them to use representations to support their work. These could include drawings of base ten blocks (flats, rods, and units), tens and ones charts, and adding and subtracting in parts using drawings or a number line.
- Adding in parts may look like one of the following strategies:
  - In the one on the left the student breaks 26 into 3+10+10+3. The student first adds 47 and 3 to land on 50, a decade number (multiple of ten), then adds the 2 tens and then adds the last 3 to reach 73.
  - In the strategy on the right the student breaks 26 into 10+10+1+1+1+1+1+1. They start by skip counting off the decade from 47 by adding 2 groups of 10 to land on 67. They then add 6 ones to reach 73.
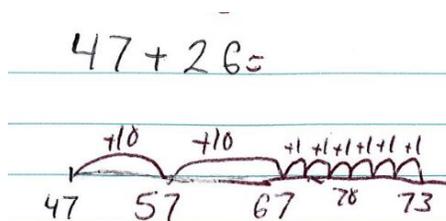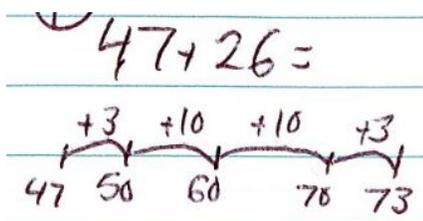
- Subtracting in parts may look like one of the following strategies:
  - In the strategy on the left the student starts at the number being subtracted, 19, and adds up in parts to reach the start number, 57. The student adds 1 to land on 20, a decade number, and then adds tens to get into the 50s. The student then adds 7 to move from 50 to 57. Their answer is the sum of all of the numbers added 1+10+10+10+7 = 38.
  - In the strategy on the right the number line is written backwards. The student started at 57 and subtracted in parts 19. 19 was broken into 7+2+10. By subtracting 7 from 57 the student lands on 50, a decade number, and then subtracts 2 to reach 48 and then 10 to reach 38. The answer is 38, the number they land on.
  - As students work on adding and subtracting in parts students should be encouraged to think strategically about how much is added and subtracted. Landing on decade numbers and then adding or subtracting multiples of 10 and 100 makes the computational work easier for students.
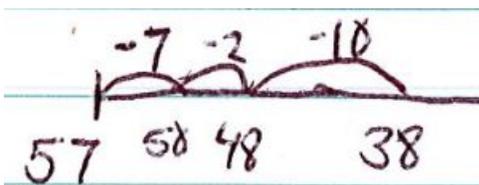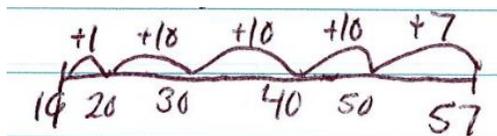
- Consider the progression of the types of numbers in tasks:

○ Two-digit number and a two-digit number that is a multiple of ten (e.g., 36+20 or 36 - 20)
○ Two-digit number and a two-digit number where the sum or difference does not require the reorganizing/regrouping of tens and ones (e.g., 36 + 22 or 36 - 22)
○ Two-digit number and a two-digit number where the sum or difference require the reorganizing/regrouping of tens and ones (e.g., 36 + 27 or 36 - 27)

For students who are progressing towards being able to determine whether they should add or subtract numbers in a word problem (2.OA.1, 2.MD.8):
● Have students describe the action in the word problems. Avoid key words and using isolated words to determine which operation to use. Key words are distracting. Example: fewer does not always mean subtract. *Susan has 4 pens. She has 3 fewer pens than Tomika. How many pens does Tomika have?*
● Use strategies such as part-part-whole mats or model drawing to support students' exploration of word problems. Example: There are some birds on the fence. If 15 birds leave and there are 18 birds still there, how many birds were first there?

Birds who left (18)	Birds still there (15)
Birds first there (18+15)	

Meets Expectation	**Students that are consistently scoring "Meets Expectation" in this cluster are able to meet each standard consistently with evidence that they can solve tasks and explain their reasoning.**
	<u>Next Steps:</u> **For students who have mastered the money concepts in this cluster (2.MD.8):** ● Consider posing a project-based learning (PBL) activity, project, or performance task that requires students to solve real-world problems related to money. This work could include 3 digit numbers as long as students are able to use models to support their exploration of tasks.