

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 6 Working with Linear Measurement

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 6 of the Instructional Frameworks](#) for more information.

NC.2.MD.1 Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

NC.2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

NC.2.MD.3 Estimate lengths in using standard units of inches, feet, yards, centimeters, and meters.

NC.2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

NC.2.MD.5 Use addition and subtraction, within 100, to solve word problems involving lengths that are given.

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**

Not Yet

Students that are consistently scoring “Not Yet” could have a variety of errors. These errors may include not yet being able to estimate or accurately measure the length of objects OR students are unable to solve addition and subtraction word problems in measurement contexts within 50.

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Next Steps:

For students are progressing at measuring the length of objects accurately (2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4):

- Provide tasks for students to estimate the length of objects (2.MD.3) then measure objects in and around the classroom to determine lengths (2.MD.1, 2.MD.2) and compare lengths (2.MD.4). Work with students in small groups to help students ensure that the measurement tool is lined up at the beginning of the object, and that the measurement tool is read correctly in order to determine the length of the object.
- Follow up tasks with conversations about the processes students are using to measure objects (2.MD.1, 2.MD.4).
- When students are measuring one length with two different units provide students with opportunities to reason and discuss with peers and the teacher how one length could have two different measurements (2.MD.2).
- Possible tasks on www.Tools4NCTeachers.com: Who Measured Correctly, Best Tools to Measure, Measuring and Comparing Lengths

For students who are not yet able to consistently add and subtract within 50 (2.OA.1, 2.MD.5):

- 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.5):

- 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)	

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Progressing

Students that are consistently scoring “Progressing” may have errors with either measurement concepts or solving addition and subtraction word problems with measurement contexts.

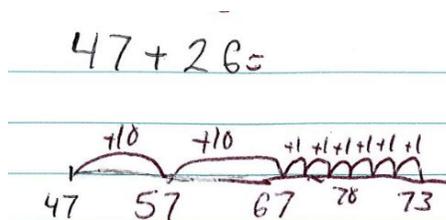
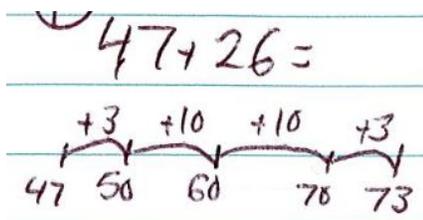
Next Steps:

For students are progressing at measuring the length of objects accurately (2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4):

- Provide tasks for students to estimate the length of objects (2.MD.3) then measure objects in and around the classroom to determine lengths (2.MD.1, 2.MD.2) and compare lengths (2.MD.4).
- Follow up tasks with conversations about the processes students are using to measure objects (2.MD.1, 2.MD.4).
- When students are measuring one length with two different units provide students with opportunities to reason and discuss with peers and the teacher how one length could have two different measurements (2.MD.2).
- Possible tasks on www.Tools4NCTeachers.com: Who Measured Correctly, Best Tools to Measure, Measuring and Comparing Lengths.

For students who are progressing at consistently adding and subtracting within 100 (2.OA.1, 2.MD.5):

- 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 $10+10+1+1+1+1+1$. 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.

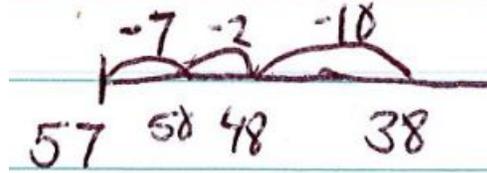
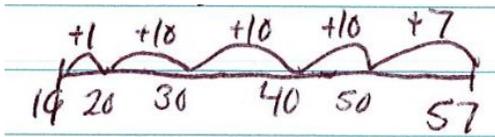


- Subtracting in parts may look like one of the following strategies:
 - In the strategy on the left the student starts at the number being subtracted, 19, and adds up in parts to reach the start number, 57. The student adds 1 to land on 20, a decade number, and then adds tens to get into the 50s. The 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

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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.5):

- 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?

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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.
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Next Steps:

For students who have mastered the measurement concepts in this cluster (2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4):

- Consider posing a project-based learning (PBL) activity, project, or performance task that requires students to design and possibly build something that includes measurement skills. Ideas from Howard County, MD are [here](#).

For students who are able to add and subtract numbers within 100 in word problems, including measurement contexts (2.OA.1, 2.MD.5):

- Pose three-digit tasks to students, including two-step problems. Students in Grade 2 should use manipulatives or make drawings for all problems.