

**MOBILE COUNTY PUBLIC SCHOOLS
DIVISION OF CURRICULUM & INSTRUCTION
SECOND GRADE MATHEMATICS INSTRUCTIONAL PLANNING GUIDE
2017-2018: QTR3**

**Qtr. 3: Weeks 1-3
January 4 – January 25 (15 days)
Grade 2, Unit 7**

UNIT OVERVIEW: WORK WITH TIME AND MONEY

In this unit, students will extend their work with telling time to the hour, half-hour, and quarter hour in order to tell (orally and in writing) the time indicated on both analog and digital clocks to the nearest five minutes. Teachers help students make connections between skip counting by 5s (2.NBT.2) and telling time to the nearest five minutes on an analog clock. Students will also indicate if the time is in the morning (a.m.) or in the afternoon/evening (p.m) as they record the time. In this unit, they will also continue solving word problems involving either dollars or cents.

ESSENTIAL QUESTIONS:

- What is the difference between a.m. and p.m.?
- How do you show the same amount of money using different sets of coins?
- How can you use money to solve word problems?
- How is counting money useful in real life?

KEY VOCABULARY:

analog clock, digital clock, hour hand, minute hand, hour, half-hour, quarter hour, minute, dollar bill, coins, penny, nickel, dime, quarter

Standards/Objectives

Opportunity for Depth Standards

[2-OA.2] Fluently ADD and SUBTRACT within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.

Standards Clarification

[2-OA.2] Fluently add and subtract within 20.

Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Separated)

Supporting Standards

- [2-MD.7] TELL and WRITE** time from analog and digital clocks to the nearest five minutes, using a.m and p.m.
- Students make connections between skip counting by 5s and telling time to the nearest five minutes on an analog clock.

Standards Clarification

[2-MD.7] Time to the hour, half hour, quarter hour, and 5 minutes with a.m. and p.m.

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<p>[2-MD.8] SOLVE word problems involving dollar bills, quarters, dimes, nickels and pennies, using \$ and ¢ symbols appropriately.</p> <ul style="list-style-type: none"> • This is the first time money is introduced formally as a standard. Therefore, students will need numerous experiences with coin recognition and values of coins before using coins to solve problems. • For example, 25 cents can look like a quarter, two dimes and a nickel, and it can look like 25 pennies, and still all remain 25 cents. This concept of equivalent worth takes time and requires numerous opportunities to create different sets of coins, count sets of coins, and recognize the “purchase power” of coins (a nickel can buy the same things a 5 pennies). 	<p>[2-MD.8] Identify coins and skip count by like coins; count mixed coins to \$5 (connect to 500). Solve word problems (variety of types) with money.</p>
Additional	Standards Clarification
<p>[2-G.3] Partition circles and rectangles into two, three, or four equal shares; describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc.; and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<p>[2-G.3] Partition circles ONLY (connect to telling time.)</p>

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Resources for Quarter 3, Unit 7
Some tasks may need to be modified to follow MCPSS pacing.

<p>Engage New York Module 8 Topic D – (MD7) https://www.engageny.org/resource/grade-2-mathematics-module-8</p>	<p>Georgia Standards Unit 2 - (OA2) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</p> <ul style="list-style-type: none"> • Incredible Equations • Order is Important <p>Unit 3 - (MD7) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-3.pdf</p> <ul style="list-style-type: none"> • Number Line Clock • Missed Bedtime <p>Unit 4 - (MD8) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf</p> <ul style="list-style-type: none"> • Story Problems Revisited • What I Have and What I Need • Shopping for School Supplies <p>Unit 5 (G3) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-5.pdf</p> <ul style="list-style-type: none"> • Sharing Equally 	<p>North Carolina MD7, MD8, G3 (connect to analog clock in MD7 activities) http://commoncoretasks.ncdpi.wikispaces.net/2.MD.7-2.MD.8+Tasks</p> <p>OA2 http://commoncoretasks.ncdpi.wikispaces.net/2.OA.2+Tasks</p>	<p>Math In Focus Chapter 11 Lessons 1-3 – (MD8) Chapter 14 Lessons 2-4 – (MD7)</p>
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Focus Standards for Mathematical Practice

MP.5 Use appropriate tools strategically.

MP.6 Attend to precision.

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Qtr. 3: Weeks 4-6

January 26 – February 22 (15 Days)

Grade 2, Unit 8 Place Value Understanding

UNIT OVERVIEW: USE PLACE VALUE UNDERSTANDING AND PROPERTIES OF OPERATIONS TO ADD AND SUBTRACT.

In this unit, students will use their understanding of addition to develop fluency with addition and subtraction within 100. They will solve problems within 1000 by applying their understanding of models for addition and subtraction, and they will develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. Students will select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

ESSENTIAL QUESTIONS:

How can I learn to quickly calculate sums and differences mentally?
How can I use a number line to find a number that is 10 more or 10 less than a given number?
What happens to the value of a number when we add 10 to it or subtract 10 from it? What digits change? What digits stay the same? Why?

KEY VOCABULARY:

add, subtract, sum, difference, equal, strategy, estimate, mental math, compose, decompose, place value, digit, ten more, ten less, one hundred more, one hundred less, model, properties of operations

Standards/Objectives

Mastery Standards

Standards Clarification

[2-NBT.5] Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

[2-NBT.5] Embed with NBT6 & NBT7.

[2-NBT.6] Add up to four two-digit numbers using strategies based on place value and properties of operations.

[2-NBT.6] Add up to 4 two-digit numbers.

[2-NBT.8] Mentally add 10 or 100 to a given number 100 - 900, and mentally subtract 10 or 100 from a given number 100 - 900.

[2-NBT.8] Mentally +/- 10 & 100.

[2-NBT.9] Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)

[2-NBT.9] Explain strategies and why they work.

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Opportunity for Depth Standards	Standards Clarification
[2-NBT.7] ADD and SUBTRACT within 1000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding and subtraction three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	[2-NBT.7] Add and subtract within 1,000 using CONCRETE MODELS or DRAWINGS.
[2-OA.1] Use addition and subtraction within 100 to solve one-and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	<p>[2-OA.1] Harder types, NO two step problems.</p> <p><u>Compare Bigger Unknown</u> (Version with “fewer”): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = \square$ $3 + 2 = \square$</p> <p><u>Compare Smaller Unknown</u> (Version with “more”): Julie has 3 more apples than Lucy. Julie has five apples. How many apples does Lucy have? $5 - 3 = \square$ $\square + 3 = 5$</p> <p><u>Take From Start Unknown</u> Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $\square - 2 = 3$</p>
[2-OA.2] Fluently ADD and SUBTRACT within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.	<p>[2-OA.2] Fluently add and subtract within 20.</p> <p><i>Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Separated)</i></p>
Continued (not new)	
NBT1, NBT2, NBT3, NBT4, OA3, OA4 Continue for reinforcement and review	

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Resources for Quarter 3, Unit 8
Some tasks may need to be modified to follow MCPSS pacing.

<p>Engage New York Module 4 - (NBT5, NBT7, NBT8, NBT9) https://www.engageny.org/resource/grade-2-mathematics-module-4</p> <p>Module 5 – (NBT7, NBT8, NBT8) https://www.engageny.org/resource/grade-2-mathematics-module-5</p>	<p>Georgia Standards Units 2 - (OA1, OA2, NBT5) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</p> <ul style="list-style-type: none"> • Addition Strategies • Subtraction: Modeling with Regrouping • Subtraction Story Problems • Counting Mice • Every Picture Tells a Story <p>Unit 4 -(OA1, OA2, NBT5, NBT6, NBT7, NBT9) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf</p> <ul style="list-style-type: none"> • Multi-Digit Addition Revisited • Subtraction: Modeling with Regrouping 	<p><u>Inside Mathematics</u> - (NBT 5, NBT6, NBT7, NBT 8, NBT9, OA1, OA2) http://www.insidemathematics.org/common-core-resources/mathematical-content-standards/standards-by-grade/2nd-grade</p>	<p>Math In Focus Chapter 3 pages 61-64, 100-103, 108, 110, 114, 117-119, 121, 126, 195, 268, 289 – (NBT5) Chapter 10 Lessons 1-4 – (NBT8)</p>
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Focus Standards for Mathematical Practice

MP.1 Make sense of problems and persevere in solving them.

MP.2 Reason abstractly and quantitatively.

MP.6 Attend to precision.

MP.8 Look for and express regularity in repeated reasoning.

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Qtr. 3: Weeks 7-9

February 23 – March 16 (16 Days)

Grade 2, Unit 9 Relate Addition and Subtraction to Length

UNIT OVERVIEW: RELATE ADDITION AND SUBTRACTION TO LENGTH

In this unit, students will apply the concept of measurement to solve addition and subtraction word problems using numbers within 100. They should use the same unit of measurement in these problems.

ESSENTIAL QUESTION:

How can we use a variety of tools to compare and determine length?
 How do you describe the relationship between two measurements?
 Will we get the same answer if we measure a length in a different unit?

KEY VOCABULARY:

inch, foot, yard, centimeter, meter, ruler, yardstick, meter stick, measuring tape, estimate, length, equation, number line, equally spaced, point, addition, subtraction, unknown, sums, differences, measure, standards units, customary, metric, units

Standards/Objectives

Mastery Standards

Standards Clarification

[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.

[2-MD.2] Measure using different units.

[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.

[2-MD.4] Measure and compare lengths.

[2-MD.6] Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2..., and represent whole-number sums and differences within 100 on a number line diagram.

[2-MD.6] Add/subtract using a number line.

Opportunity for Depth Standards

Standards Clarification

[2-OA.2] Fluently ADD and SUBTRACT within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.

[2-OA.2] Fluently add and subtract within 20.

Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Separated)

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[2-MD.5] Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	[2-MD.5] Relate addition and subtraction to length. Word problems involving length.
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Continued not new

MD1, MD3 Continue for reinforcement and review

Resources for Quarter 3, Unit 9
Some tasks may need to be modified to follow MCPSS pacing.

<p>Engage New York Module 2 Topics C, D – (MD2, MD4, MD5, MD6) https://www.engageny.org/resource/grade-2-mathematics-module-2</p>	<p>Georgia Standards Unit 2 - (OA2) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</p> <ul style="list-style-type: none"> Incredible Equations Order is Important <p>Unit 3 - (MD2, MD4, MD5, MD6) https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf</p>	<p>Howard County (MD2, MD4, MD5, MD6, OA2) https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance</p>	<p>Math In Focus Chapter 13 Lesson 4-5 – (MD2, MD4, MD5)</p>
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Focus Standards for Mathematical Practice

MP.1 Make sense of problems and persevere in solving them.

MP.5 Use appropriate tools strategically.

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