

## NJDOE MODEL CURRICULUM PROJECT

**CONTENT AREA: Mathematics**

**GRADE: 1**

**UNIT: # 2**

**UNIT NAME: Word Problems Involving Addition and Subtraction**

STUDENT LEARNING OBJECTIVES		CORRESPONDING CCSS	
<b>1</b>	Use addition and subtraction within 20 to solve word problems involving situations or adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.	<b>1.OA.1</b>	<b>Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<sup>2</sup></b>
<b>2</b>	Solve addition word problems with three whole numbers with sums less than or equal to 20.	1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
<b>3</b>	Demonstrate understanding of the equal sign by determining if an equation is true or false.	1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? <math>6 = 6</math>, <math>7 = 8 - 1</math>, <math>5 + 2 = 2 + 5</math>, <math>4 + 1 = 5 + 2</math>.</i>
<b>4</b>	Solve addition or subtraction equations by finding the missing whole number in any position.	1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 + ? = 11</math>, <math>5 = ? - 3</math>, <math>6 + 6 = ?</math>.</i>
<b>5</b>	Count to 120, starting at any number less than 120.	<b>1.NBT.1</b>	<b>Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</b>
<b>6</b>	Read and write numerals to 120 including representing a number of objects with a written numeral.		

***Bold type indicates grade level fluency requirements.*** (Identified by PARCC Model Content Frameworks).

## Selected Opportunities for Connection to Mathematical Practices

### 1. **Make sense of problems and persevere in solving them.**

SLO #1 Know the process and necessary information needed to solve addition and subtraction word problems with unknown quantities (within 20).

SLO #2 Analyze the information given in an addition word problem (with three numbers) in order to solve the problem.

SLO #4 Analyze equations with missing values in any position and be able to solve the equations.

### 2. **Reason abstractly and quantitatively.**

SLO #1 Understand the known and unknown quantities in word problems and how they relate to solving the problem.

SLO #2 Understand what the numbers in different word problems represent and how the information is relevant to the solution.

SLO #6 Know how to represent the quantity or set of objects with a written numeral of any number less than 120.

### 3. Construct viable arguments and critique the reasoning of others.

SLO #3 Understand the quantities in an equation and demonstrate this understanding by applying the equal sign correctly.

### 4. **Model with mathematics.**

SLO #1 be able to write a mathematical equation based on a word problem.

SLO #2 Apply previously learned addition skills to solve addition word problems (with three numbers).

### 5. Use appropriate tools strategically.

### 6. **Attend to precision.**

SLO #3 Understand the meaning of the equal sign and apply the sign consistently and appropriately to equations.

### 7. Look for and make use of structure.

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

*Bold type identifies possible starting points for connections to the SLOs in this unit.*

## Greater Brunswick Charter School Curriculum

Grade level: 1		Subject: Math			Unit #: 2		
Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources
					Whole Group	Small Group / Stations	
1	<ul style="list-style-type: none"> <li>Counting on/up</li> <li>Counting 1 to 10</li> <li>Reading and writing 1 to 10</li> </ul>	1, 5, 6	<ul style="list-style-type: none"> <li>To add to a number by counting up.</li> <li>To use pennies to count on or count up.</li> </ul>	<i>How can I add to a number just by counting?</i>	You can reinforce the Commutative Property for later by emphasizing that it doesn't matter which of the two numbers is the starting point for counting up.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.211-222
2	<ul style="list-style-type: none"> <li>Number line</li> <li>Counting 1 to 20</li> <li>Reading and writing 10 to 20</li> </ul>	1, 5, 6	To use a number line to add two numbers	<i>How can seeing the numbers on a line help me add?</i>		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.223-228
3	<ul style="list-style-type: none"> <li>Adding with doubles</li> <li>Counting 1 to 20</li> <li>Reading and writing 10 to 20</li> </ul>	1, 5, 6	To use doubles to add faster	<i>How can knowing my doubles facts make me a faster adder?</i>	Adding with doubles isn't an SLO, but it's a reasonable skill to include here.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.229-234
4	<ul style="list-style-type: none"> <li>Adding with near doubles</li> <li>Counting 1 to 30</li> <li>Reading and writing 20 to 30</li> </ul>	1, 5, 6	To identify the closest near double fact to use to add.	<i>How can adding one to one of the doubles help me add faster?</i>	This is more about seeing that a number is made up of two other numbers (that's the double+1)	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.235-242
5	<ul style="list-style-type: none"> <li>Using adding to solve problems</li> <li>Counting 1 to 30</li> <li>Reading and writing 20 to 30</li> </ul>	1, 2, 5, 6	To use an addition fact to solve a real world problem	<i>How can I understand a problem better by picturing it in my mind?</i>	Reinforce the reading comprehension skill of making the movie in their mind for each problem and NOT focusing on keywords.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.243-248
6	<ul style="list-style-type: none"> <li>Making 10s</li> <li>Reading and writing 10 to 30</li> </ul>	1, 2, 5, 6	To use a 10 frame to help break apart sums	<i>How do 10s make it easier for me to visualize how many?</i>	Remember, making 10s is a big foundational skill in math. Take the time to do it.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.249-254 <a href="#">SnappyMath options</a> <a href="#">YouTube tune</a> <a href="#">Worksheetfun</a>

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					Whole Group	Small Group / Stations	
7						<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	<a href="#">MathWSLand</a> <a href="#">HelpingWithMath</a>
8	<ul style="list-style-type: none"> <li>Adding order</li> <li>Counting 1 to 40</li> <li>Reading and writing 30 to 40</li> </ul>	1, 2, 4, 5, 6	<ul style="list-style-type: none"> <li>To add in any order</li> <li>To fill in an addend given the sum</li> <li>To show that both sides of the equal sign are the same</li> </ul>	How can I show that both sides of the equal sign are the same?		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.255-260
9	<ul style="list-style-type: none"> <li>Adding three numbers</li> <li>Counting 1 to 40</li> <li>Reading and writing 30 to 40</li> </ul>	1, 2, 3, 4, 5, 6	To add three numbers together by math facts or by counting up twice.	<i>How is adding three numbers just like adding two numbers?</i>		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.261-266
10	<ul style="list-style-type: none"> <li>Adding</li> <li>Counting 1 to 50</li> <li>Reading and writing 30 to 50</li> </ul>	1, 2, 3, 4, 5, 6	To determine weaknesses in the content from the past 8 days	<i>What don't I know well enough, yet?</i>		<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.267-272
11	<ul style="list-style-type: none"> <li>Adding</li> </ul>	1, 2, 3, 4				<ul style="list-style-type: none"> <li>Review</li> <li>Assessment</li> </ul>	
12	<ul style="list-style-type: none"> <li>Subtracting</li> <li>Counting 1 to 50</li> <li>Reading and writing 40 to 50</li> </ul>	1, , 5, 6	To determine reading for the next concepts			<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.275-280
13	<ul style="list-style-type: none"> <li>Count back/down</li> <li>Counting 1 to 60</li> <li>Reading and writing 50 to 60</li> </ul>	1, 5, 6	To subtract by counting back or down	<i>How can I subtract just back counting backwards?</i>		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.281-286

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					Whole Group	Small Group / Stations	
14	<ul style="list-style-type: none"> <li>Number line</li> <li>Counting 1 to 70</li> <li>Reading and writing 50 to 70</li> </ul>	1, 5, 6	To subtract using a number line	<i>How can seeing the numbers on a line help me subtract?</i>		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.287-292
15	<ul style="list-style-type: none"> <li>Subtracting with doubles</li> <li>Counting 1 to 70</li> <li>Reading and writing 60 to 70</li> </ul>	1, 5, 6	To use doubles to subtract faster	<i>How can knowing my doubles facts make me a faster subtracter?</i>	Not sure you should spend a lot of energy on this. Typically, it's minimally useful.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.293-298
16	<ul style="list-style-type: none"> <li>Using subtracting to solve problems</li> <li>Counting 1 to 80</li> <li>Reading and writing 60 to 80</li> </ul>	1, 2, 5, 6	To use a subtraction fact to solve a real world problem	<i>How can I understand a problem better by picturing it in my mind?</i>	Reinforce the reading comprehension skill of making the movie in their mind for each problem and NOT focusing on keywords.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.299-306
17	<ul style="list-style-type: none"> <li>Making 10s</li> <li>Reading and writing 70 to 80</li> </ul>	1, 2, 5, 6	To use a 10 frame to help break apart totals	<i>How do 10s make it easier for me to visualize how many less?</i>	Remember, making 10s is a big foundational skill in math. Take the time to do it.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.307-312
18						<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	
19	<ul style="list-style-type: none"> <li>Subtraction</li> <li>Counting 1 to 80</li> <li>Reading and writing 50 to 80</li> </ul>	1, 2, 3, 4, 5, 6	To determine weaknesses in the content from the past 8 days	<i>What don't I know well enough, yet?</i>		<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	
20	<ul style="list-style-type: none"> <li>Subtraction</li> </ul>	1, 2, 3, 4				<ul style="list-style-type: none"> <li>Review</li> <li>Assessment</li> </ul>	

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Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources
					Whole Group	Small Group / Stations	
21	<ul style="list-style-type: none"> <li>The relationship between addition and subtraction</li> <li>Counting 1 to 90</li> <li>Reading and writing 80 to 90</li> </ul>	1, 2, 3, 4, 5, 6	To use the relationship between addition and subtraction to complete number sentences.	<i>How are addition and subtraction related to each other?</i>		<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.313-318
22	<ul style="list-style-type: none"> <li>Fact Families</li> <li>Counting 1 to 100</li> <li>Reading and writing 90 to 100</li> </ul>	1, 3, 4, 5, 6	To recognize (and memorize) the +/- relationship between three numbers.	<i>How does memorizing fact families help me add and subtract easier and faster?</i>	Don't be afraid to drill these while waiting in line or during transition times in the classroom.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.319-324
23	<ul style="list-style-type: none"> <li>Missing addends</li> <li>Counting 1 to 110</li> <li>Reading and writing 90 to 110</li> </ul>	3, 4, 5, 6	To find the missing number in an equation.		This is why you have them memorize the fact families.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.325-330
24	<ul style="list-style-type: none"> <li>Fact families</li> <li>Missing addends</li> <li>Counting 1 to 110</li> <li>Reading and writing 90 to 110</li> </ul>	1, 3, 4, 5, 6	To fluently identify the missing number in an equation	<i>How fast can I get when I add and subtract with fact families?</i>	This is another day to work on fact families. Make a game or a competition out of it.	<ul style="list-style-type: none"> <li>Warm-up</li> <li>Lesson &amp; Guided Practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.319-330 <a href="#">Math Drills</a> <a href="#">Math Drills again</a> <a href="#">TLS books</a> <a href="#">Math-Aids</a> <a href="#">Fact Family tune</a>
25	<ul style="list-style-type: none"> <li>Fluency</li> <li>Counting 1 to 120</li> <li>Reading and writing 90 to 120</li> </ul>	1, 5, 6	To fluently subtract	<i>How is knowing my fact families helping me subtract faster?</i>		<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.331-332
26	<ul style="list-style-type: none"> <li>Adding and subtracting skills</li> <li>Counting 1 to 120</li> <li>Reading and writing 100 to 120</li> </ul>	1, 2, 3, 4, 5, 6				<ul style="list-style-type: none"> <li>Differentiated intervention as needed</li> <li>Fluency practice</li> <li>Independent Practice</li> <li>i-Ready</li> </ul>	MyMath p.333-336
27	Adding and subtracting skills					<ul style="list-style-type: none"> <li>Review</li> <li>Assessment</li> </ul>	MyMath p.

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					Whole Group	Small Group / Stations	
28	<ul style="list-style-type: none"><li>Counting 1 to 120</li><li>Reading 1 to 120</li><li>Writing 1 to 120</li></ul>	5, 6				<ul style="list-style-type: none"><li>Review</li><li>Assessment</li></ul>	
29	Post-assessment intervention					<ul style="list-style-type: none"><li>Differentiated intervention as needed</li><li>Fluency practice</li><li>Independent Practice</li><li>i-Ready</li></ul>	

Word Wall Candidates

Addend

Count on

Doubles

Doubles Plus

Number line

Sum

Doubles + 1

Doubles – 1

Count back

Fact Family

Missing addend

Authentic Application

Your Goal: Count on by one for a full minute

Your Role: Partner counter

Your Audience: Your partners

The Situation: You are getting an allowance each day. The amount you get is between 10 cents and 66 cents. Each day, you roll a pair of dice to find out how much money you start with. An example: if you roll a 3 and a 5, you begin with 35 cents. Then you count on for a full minute to your partners counting on to as large a number as you know.

Your Product: You do this for each of three days and write down your highest counted number each day on the form your teacher gives you.

Success Criteria: The higher the total number for the three days, the more points you score.