

NJDOE MODEL CURRICULUM

CONTENT AREA: Mathematics	GRADE: 2	UNIT: # 2	UNIT NAME: Understand the Meaning and Application of Addition and Subtraction
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STUDENT LEARNING OBJECTIVES		CORRESPONDING CCSS	
1	Recognize that in groups of even numbers objects can be counted by 2s and that in groups of odd numbers objects will not pair up evenly.	2.OA.1	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal parts.
2	Write an equation to illustrate that all even numbers can be formed from the addition of two equal addends.		
3	Add up to four two-digit numbers based on place value and properties of operations.	2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.
4	Count within 1000 by ones, 5s, 10s, and 100s beginning at any multiple of 1, 5, 10, or 100	2.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.
5	Add and subtract fluently within 10 using mental strategies	2.OA.2	Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.
6	Use a variety of strategies (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 50.	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.

Selected Opportunities for Connection to Mathematical Practices

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

SLO #1 Analyze the information given and relationships in addition and subtraction word problems.

SLO #4 Analyze the initial number or sequence given to skip count by 5s.

SLO #7 Analyze the information given to understand the relationships between two 3-digit numbers.

2. **Reason abstractly and quantitatively.**

3. SLO #1 Understand and make sense of the quantities in word problems.

SLO #4 Understand and make sense of the relationship among the numerical values when skip counting by 5s.

SLO #7 Make sense of the quantities and their relationship to each other when comparing two 3-digit numbers.

4. **Construct viable arguments and critique the reasoning of others.**

SLO #7 Create an argument using $<$, $>$, or $=$ symbols when comparing two 3-digit numbers.

5. **Model with mathematics.**

SLO #1 Apply previously learned mathematical skills to solve 1 and 2-step addition and subtraction word problems.

SLO #4 Apply previously learned skip counting skills to skip count by 5 up to 100.

6. Use appropriate tools strategically.

7. **Attend to precision.**

SLO #7 Understand the meaning of the $<$, $>$, or $=$ symbols when comparing two 3-digit numbers. Use the aforementioned symbols appropriately and consistently.

8. **Look for and make use of structure.**

SLO #2 Understand the pattern of decomposing numbers when representing 3-digits numbers

SLO #3 Understand the structure when identifying and representing bundles of ten tens.

SLO #7 Understand the pattern regarding place value and decomposition when comparing two 3-digit numbers.

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: 2		Subject: Math			Unit #: 2		
Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources (in addition to MyMath)
					Whole Group	Small Group / Stations	
1	Hundreds	2.NBT .1a	Relate hundreds, tens, and ones	<i>What does hundreds mean to you?</i>		<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath p.295-300
2	Hundreds, Tens, Ones	2.NBT .1	Read, write, and model numbers to 999	<i>How can you use objects to model a three-digit number?</i>		<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath p.301-306 Online Game – Critter Junction or Fact Dash
3	Place Value to 1,000	2.NBT .1	Identify and use words, models, and expanded form to represent numbers to 999	<i>How can you show a three-digit number two different ways?</i>	<i>Exit Ticket</i> Assign each student a number between 100-999. Tell students they can line up once they write their number two different ways. Give them extra (points, ticket, spot in line...) if they can write it three different ways.	<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath p.307-312 https://www.ixl.com/math/grade-2/convert-to-from-a-number-up-to-hundreds
4	Checking Progress		Hundreds, Hundreds, Tens, Ones, & Place Value to 1000	<i>How can I use place value?</i>	Check My Progress	<ul style="list-style-type: none"> • Lesson • Ind. Practice • i-Ready 	MyMath p.313-314 Assessment Masters p. 115
5	Add Three Numbers	2.NBT .1	Use logical reasoning to solve problems	<i>Why is it important for you to have a plan for solving a problem?</i>		<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath p.315-320 Journal Writing Activity TE p.320 https://www.ixl.com/math/grade-2/guess-the-number

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6	Read and Write Number to 1,000	2.NBT .3	Read and write numbers to 1,000	<i>How can you show different ways to represent a number to 1,000?</i>	Suggestion Intro Activity: Read a trade book such as: <i>Earth-Day Hooray</i> by Stuart J. Murphy to prepare students for the lesson	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p.321-326 Fact Dash Game Lesson Animation: Read and Write Numbers to 1,000
7	Count by 5s, 10s, and 100s	2.NBT .2	Find counting patterns	What number patterns can you find when counting?	Revisit the term: <u>skip count</u> ... <i>have students turn and talk to a partner what the term means</i>	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready (Suggested) Formative Assessment: Have students reflect on what they have learned by writing a response to the following questions: 3 Things they learned today; 2 Things they want to know more about; 1 Question they still have 	MyMath p. 327-332 https://www.ixl.com/math/grade-2/counting-patterns-up-to-1000 <i>Exit Ticket: Give students a number pattern to complete (e.g. 200,210,220,___, then have the student say the counting pattern).</i>
8	Comparing Numbers to 1,000	2.NBT .4	Compare three-digit numbers using <, >, and =	<i>What strategies can you use to compare numbers to 1,000</i>	Model the Math <i>Review of skill (Whole Group)</i> TEp. 333B	<ul style="list-style-type: none"> Lesson Guided Practice MyMath p.334 Ind. Practice MyMath p.335 i-Ready 	MyMath Tier ! On Level Activity
9	Review and Reflect					<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 339-342 Online Reteach Worksheet
10	Assessment						MyMath Summative Assessment

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11	Take Apart Tens to Add	2.OA.1	Take apart an addend to make a ten to add	<p><i>What strategies do you use when you add?</i></p> <p><i>How do you decide which addend to take apart when adding?</i></p>		<ul style="list-style-type: none"> Lesson Suggestion: <i>Model the Math TEp.165B</i> Guided Practice Ind. Practice i-Ready 	<p>MyMath p.165-170</p> <p>Reteach Sheet p. 25</p> <p>Journal Writing Activity TEp.168</p>
12	Regroup Ones as Tens	2.NBT.5	Use models to regroup as tens to add	<p><i>How can you use models to add two-digit numbers?</i></p> <p><i>How do you know if you need to regroup?</i></p>	<p><i>Exit Ticket:</i> <i>Self Assessment:</i> <i>TEp.174</i></p>	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	<p>MyMath p.171-176</p> <p>https://www.ixl.com/math/grade-2/add-a-two-digit-and-a-one-digit-number-with-regrouping</p>
13	Add to a Two-Digit Number	2.NBT.5	Add one-digit numbers and two-digit numbers	<p><i>How can fact families help you add and subtract?</i></p>	<p>Suggestion: Have students complete "Check My Progress" pp 183-184 to determine if your students are struggling.</p>	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	<p>MyMath p. 177-182</p> <p>https://www.pinterest.com/pin/189714203027444127/</p> <p>Suggested Literacy Resource: "One Duck Stuck" by Phyllis Root</p>
14	Add Two-Digit Numbers	2.NBT.5	Add two-digit numbers	<p><i>How can you use objects to add two-digit numbers</i></p>	<p><i>Exit Slip:</i> <i>Write the following on the board:</i> <i>Beth adds 2 two-digit numbers. She regroups to find the sum of 85. What could the two addends have been?</i></p>	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	<p>MyMath p. 185-190</p> <p>https://www.ixl.com/math/grade-2/add-two-two-digit-numbers-with-regrouping</p> <p>MyMath Game: Add and Subtract 2 Digit Numbers with Roy Raccoon</p>

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15	Rewrite Two-Digit Addition	2.NBT .5	Rewrite horizontal addition problems vertically to add	<p><i>How can you write an addition number sentence two different ways?</i></p> <p><i>Why is it helpful to rewrite addition?</i></p>	<p><i>Exit Ticket:</i> Formative Assessment <i>Teachers Edition p.91-92</i></p>	<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath p.195-200
16	Add Three and Four Two-Digit Numbers	2.NBT .5	Add three and four two-digit numbers	What strategies can you use to add three two-digit numbers?		<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	<p>MyMath p. 197-202</p> <p>MyMath Web Game – Add Three Two-Digit Numbers</p>
17	Problem Solving	2.OA. 1	Make a model to solve problems	What strategies can you use to help solve word problems?	<p><u>Suggestion:</u> Use trade book “A Fair Bear Share” by Stuart J. Murphy to prepare students for the lesson</p>	<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	<p>MyMath p. 203-208</p> <p>https://www.ixl.com/math/grade-2/write-addition-sentences-to-describe-pictures</p> <p>http://www.k5learning.com/sites/all/files/addition-word-problems-6R.pdf</p>
18	Fluency and Review				<p><u>Suggestion:</u> Use p.209-210 as a timed exercise</p>	<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	<p>MyMath p.209-214</p> <p>MyMath Web Game – Fact Dash</p> <p>Reteach Worksheet</p>
19	Assessment					<ul style="list-style-type: none"> • Lesson • Guided Practice • Ind. Practice • i-Ready 	MyMath Summative Assessment

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20	Two-Digit Fact Families	2.NBT .5	Use related facts to make two-digit fact families	How can you use related facts to make two-digit fact families?	<i>Exit Ticket:</i> Have a student volunteer to come up and write a two-digit addition sentence on the board. Call on the next student to come up and write the related addition fact, continue until all students had a turn.	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p.223-228 https://www.mathworksheetsland.com/topics/addition/singledouble/doublefactfam.pdf http://www.education.com/worksheet/article/fact-family-houses-third/
21	Take Tens Apart to Subtract	2.OA. 1	Take apart numbers to make a ten to subtract	How can you use objects to take apart ten when solving two-digit subtraction problems?	"The Action of Subtraction" by: Brian P. Cleary	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 229-234 MyMath Reteach Sheets MyMath Web Game: Fact Dash
22	Regroup a Ten as Ones	2.NBT .5	Use models to regroup and find differences	How does regrouping help find the difference in subtraction?	<i>Exit Ticket:</i> TE. P. 240 – Formative Assessment	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 235-240
23	Subtract from a Two-Digit Number	2.NBT .5	Subtract one-digit numbers from two-digit numbers	What steps do you use when subtracting one-digit from two-digit numbers? What tools would you use to check your answer?		<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p.241-246 https://www.ixl.com/math/grade-2/subtract-a-one-digit-number-from-a-two-digit-number-with-regrouping

Grade level: 2**Subject: Math****Unit #: 2**

Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources (in addition to MyMath)
					Whole Group	Small Group / Stations	
24	Check Progress & Subtract Two-Digit Numbers	2.NBT .5	Subtract two-digit numbers	Where would you start when subtracting two-digit numbers?	Have students complete "Check my Progress" MyMath p. 247-248 (can be completed during independent center time) Students needing extra assistance utilize Assessment Master p.89	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 249-254 https://www.ixl.com/math/grade-2/subtract-two-digit-numbers-with-regrouping https://www.youtube.com/watch?v=Buyaqe_L5-Y MyMath Web Game: Add and Subtract 2-Digit Numbers with Roy Raccoon & Critter Junction: Subtract 2-Digit Numbers
25	Rewrite Two-Digit Subtraction	2.NBT .5	Rewrite a horizontal two-digit subtraction sentence vertically before subtracting	How can you write a two-digit subtraction problem two different ways?		<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 255-260 Reteach Masters http://i0.wp.com/www.math-aids.com/images/single-multi-subtraction-worksheets.png?w=1024&h=1024

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26	Check Subtraction	2.NBT .5	Will use addition to check subtraction	How can you use addition to check subtraction? How are addition and subtraction related?	<i>Suggestion:</i> Read trade book "Alexander, Who Used to be Rich Last Sunday" by Judith Viorst to introduce the lesson	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 261-266 Journal Writing Activity: Have the students write a journal reflection on the lesson. Have students discuss what they learned and/or what they had trouble with http://www.education.com/worksheet/article/check-work-two-digit-subtraction/ Reteach Masters
27	Write a Number Sentence Lesson 8	2.OA. 1	Write a number sentence to solve problems	What strategies can you use to create a number sentence to solve problems?	<i>This lesson can be used as a review.</i>	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p. 267-272
28	Two-Step Word Problems	2.OA. 1	Read and solve two-step word problems	What key words do you look for to help you solve a two-step word problem? How can you prove your answers are reasonable?	<i>Exit Ticket:</i> Formative Assessment TE p. 278	<ul style="list-style-type: none"> Lesson Guided Practice Ind. Practice i-Ready 	MyMath p.273-278 https://www.superteacherworksheets.com/multiple-step-problems/multiple-step-basic1_BASIC.pdf https://www.ixl.com/math/grade-2/write-the-subtraction-sentence-up-to-two-digits

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Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources (in addition to MyMath)
					Whole Group	Small Group / Stations	
29	Fluency & Review					<ul style="list-style-type: none">• Lesson• Guided Practice• Ind. Practice• i-Ready	MyMath p. 279-284 Utilize Fact Dash Provide timed fluency activity
30	Assessment						MyMath Summative Assessment

Word Wall Candidates

hundreds
compare
fact family

place value
greater than
sum

digit
less than
regroup

expanded form
equal to

thousand
difference

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Day	Topic	SLO	Learning Objectives	Essential Questions	Suggested Student Activities		Possible Resources (in addition to MyMath)
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<u>Authentic Application</u>							
Your Goal:		Using addition and subtraction you will design a beaded necklace with a total of 100.					
Your Role:		Create and assign prices to letters to make a beaded necklace.					
Your Audience:		Your classmates					
The Situation:		<ul style="list-style-type: none"> You must create a chart of letters A-Z and assign a number value to each letter. You will decide whether the letter will be added or subtracted (for example A = +8, B = -5, C = -2). You will decide whether you want to use your name, a pet's name, your friend's name, parent's name, or a word from the math unit, word wall word, a word from around the classroom or school (you can have more than one word) You must estimate to decide if the word(s) you chose is no more than \$1.00 					
The Final Product:		<p>You must make a chart of the letters and value:</p> <ul style="list-style-type: none"> On your paper, at the top, will be the word you chose Next, create the chart of letters and values Draw the string of letters with the corresponding value Create a two-step word problem using your word and a fellow classmates word Solve the problem and illustrate your work <p>You must write a paragraph about how you chose your word or words and how you used addition and/or subtraction to find the total cost. You must illustrate your necklace.</p>					
Success Criteria:		<p>To be successful, you must provide, at the end of the project:</p> <ul style="list-style-type: none"> A complete chart A-Z with values attached. A detailed paragraph with illustrations of the Alphabet Chart and the necklace of letters to make your word 					