

Grade: 2 Unit: 1	Operations and Algebraic Thinking	7 Weeks
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Progression	
1 <sup>st</sup> Grade	Students learned to add and subtract, gaining mental fluency within 10. Students learned to use groups of “tens” as a strategy for adding and subtracting numbers within 100.
2 <sup>nd</sup> Grade	<b>Students will solve 1 and 2 step word problems involving 2 digit numbers using addition and subtraction. In Unit 2, this work will be extended to 3 digit numbers. By the end of the year, students should gain mental fluency within 20, and paper fluency within 100. However, students are not required to master the standard algorithm in 2<sup>nd</sup> Grade.</b>
3 <sup>rd</sup> Grade	Students will extend their work from 2 <sup>nd</sup> grade by rounding whole numbers to the nearest 10 or 100, and by adding and subtracting numbers within 1000. Students will build toward mastery of the standard algorithm by the end of 4 <sup>th</sup> grade.

**STUDENT LEARNING GOALS**

**Mathematics Standards (Appendices A & B)**

[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.

[2.OA.2:](#) Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

[2.OA.3:](#) 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 addends.

[2.NBT.2:](#) Count within 1000; skip-count by 5s, 10s, and 100s.

[MP1:](#) Make sense of problems and persevere in solving them.

[MP6:](#) Attend to Precision

Interdisciplinary Standards		Key Vocabulary	
<b>Technology Integration</b> <i>(Appendix C)</i>	<b>21<sup>st</sup> Century Skills</b> <i>(Appendix D)</i>	<b>Addend</b>	<b>Fact Family</b>
IS1. Information Strategies	TCS1. Use of Information	<b>Array</b>	<b>One-Step Problem</b>
IS2. Information Use	TCS5. Problem Solving	<b>Column</b>	<b>Odd Number</b>
		<b>Difference</b>	<b>Row</b>
		<b>Digit</b>	<b>Sum</b>
		<b>Even Number</b>	<b>Two-Step Problem</b>

<b>Enduring Understandings</b> <ul style="list-style-type: none"> <li>I can use addition and subtraction to model and solve everyday problems.</li> <li>I can use strategies to add and subtract multi-digit numbers.</li> <li>I can tell if a number is odd or even.</li> </ul>	<b>Essential Questions</b> <ul style="list-style-type: none"> <li>How can I use math to solve real problems?</li> <li>What is a fact family?</li> <li>How can I add and subtract numbers bigger than 10?</li> <li>How can I group objects to make it easier to add?</li> <li>What makes a number odd or even?</li> </ul>
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**Assessment Plan**

<b>Summative Assessment(s)/Performance Based Assessments including 21<sup>st</sup> Century Learning</b>  RCC Interim Assessment, Student p.48-49 RCC Performance Task, Student p. 50	<b>Formative and Diagnostic Assessment(s)</b>  STAR Math Assessment (Fall) RCC Embedded Tasks and Assessments
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**Learning Plan Components**

Text	<b>Ready Common Core Mathematics Instruction 2</b> , 2014, Curriculum Associates, ISBN: 978-0-7609-8637-0
Print	<b>Ready Common Core Mathematics Teacher Resource Book 2</b> , 2014, Curriculum Associates, ISBN: 978-0-7609-8644-8
Electronic	<a href="http://www.teacher-toolbox.com">www.teacher-toolbox.com</a> <a href="http://www.stratfordmath.wikispaces.com">www.stratfordmath.wikispaces.com</a> <a href="http://www.xtramath.org">www.xtramath.org</a>
<b>Week 1</b>	Students will: <ul style="list-style-type: none"> <li>Identify the three related numbers that form number sentences as part of a fact family</li> <li>Apply counting strategies to find a missing addend or difference</li> <li>Use inverse operations to find an unknown addend or difference</li> </ul>

Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 1:</u> <i>Understand</i> Mental Math Strategies (Fact Families)	Build Fact Families (p.4) Hands-On (p.7) Whole Task (p.10) Differentiated (p.11)		<a href="#">Teacher-Toolbox</a> (2 Tutorials, 2 Tools for Instruction)

<b>Week 2</b>	Students will: <ul style="list-style-type: none"> <li>Analyze one-step problems to determine the operation needed to solve</li> <li>Apply the use of fact families as a strategy to solve one-step problems and build number sense</li> <li>Interpret models that represent a one-step problem</li> </ul>
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Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 2:</u> Solve One-Step Word Problems	Two Unknown Addends (p.13) Hands-On (p.15) Formative (p.21) Differentiated (p.22)		<a href="#">Teacher-Toolbox</a> (2 Tutorials, 4 Tools for Instruction)

<b>Week 3</b>	Students will: <ul style="list-style-type: none"> <li>Demonstrate the mental process involved in making a 10 when adding and subtracting within 20</li> <li>Interpret models that represent making a 10</li> </ul>		
<b>Lessons</b>	<b>Tasks / Activities</b>	<b>Worksheets</b>	<b>Technology</b>
<u>RCC Lesson 3:</u> <i>Understand Mental Math Strategies (Make a Ten)</i>	Partners of Ten (p.24) Hands-On (p.25) Hands-On (p.26) Formative (p.30) Differentiated (p.31) GA Order Is Important GA Incredible Equations "Race to 30" "Ten Facts" "Doubles" "Doubles Plus One"	NC Doubles Plus One NC Making Connections SF 1-9, 1-10, 1-11 SF 2-2, 2-3, 2-8, 2-9	<a href="#">Teacher-Toolbox</a> (2 Tutorials, 1 Tool for Instruction)
<b>Week 4</b>	Students will: <ul style="list-style-type: none"> <li>Identify odd and even numbers</li> <li>Relate doubles and doubles + 1 facts to odd and even numbers</li> <li>Use skip counting by 2s to identify even numbers</li> </ul>		
<b>Lessons</b>	<b>Tasks / Activities</b>	<b>Worksheets</b>	<b>Technology</b>
<u>RCC Lesson 4:</u> <i>Understand Even and Odd Numbers</i>	Equal and Unequal Groups (p.33) Hands-On (p.34) Formative (p.39) Differentiated (p.40) GA Where am I on the Number Line? GA Number Hop GA Bumpy or Not Bumpy GA Are We Odd or Even? GA Cookie Monster GA Pattern Block Drop GA No You Can't	SF 3-9 GA Two of Everything!	<a href="#">Teacher-Toolbox</a> (2 Tutorials, 2 Tools for Instruction)
<b>Week 5</b>	Students will: <ul style="list-style-type: none"> <li>Interpret an array up to 5 rows and 5 columns</li> <li>Calculate the number of items in an array using repeated addition and skip-counting</li> <li>Write an equation to express the sum of items in an array</li> </ul>		
<b>Lessons</b>	<b>Tasks / Activities</b>	<b>Worksheets</b>	<b>Technology</b>
<u>RCC Lesson 5:</u> Add Using Arrays	Build Arrays (p.42) Hands-On (p.44) Formative (p.48) Differentiated (p.49) GA The Candy Box	SF 2-4	<a href="#">Teacher-Toolbox</a> (3 Tutorials, 3 Tools for Instruction)

<b>Week 6</b>	Students will: <ul style="list-style-type: none"> <li>Analyze two-step problems to determine the series of operations needed to solve</li> <li>Apply the commutative property of addition as a strategy to solve two-step problems and build number sense</li> <li>Interpret models that represent a two-step problem</li> </ul>		
<b>Lessons</b>	<b>Tasks / Activities</b>	<b>Worksheets</b>	<b>Technology</b>
RCC Lesson 6: Solve Two-Step Word Problems	Model a Two-Step Word Problem (p.51) Formative (p.59) Differentiated (p.60)		<a href="#">Teacher-Toolbox</a> (2 Tutorials, 2 Tools for Instruction)
<b>Week 7</b>	Students will: <ul style="list-style-type: none"> <li>Demonstrate mastery of objectives</li> </ul>		
<b>Summative Assessment</b>		<b>Performance Task</b>	
RCC Unit 1 Interim Assessment -Student p. 48-49 -Scoring Guide (p. 61)		RCC Unit 1 Performance Task -Student p. 50 -Rubric (p. 63)	