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Correlation Criteria: COLORADO ACADEMIC STANDARDS:
MATHEMATICS 2020, SCIENCE 2020
for KINDERGARTEN, 1ST, AND 2ND GRADES

APRIL 2021

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Correlation

Waterford Reading Academy:

Math & Science

100%

Colorado Academic Standards:
Mathematics 2020,
Science 2020

*Correlation content includes both Waterford Digital Resources and Waterford Teacher Resources.

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COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MATHEMATICS		
KINDERGARTEN, STANDARD 1. NUMBER AND QUANTITY		
K.CC.A. Counting & Cardinality: Use number names and the count sequence.		

1. Count to 100 by ones and by tens. (CCSS: K.CC.A.1)	• Number Songs
	• Counting Songs
	• Number Counting
	• Order Numbers
	• Number Instruction
	• Skip Counting
	• Counting Puzzle
		• Count to 100 by ones and tens.pdf: Count to 100 by ones and tens.
		  – Missing Numbers
		  – Count On By 1
		  – Numbers 1–5
		  – Numbers 6–10
		  – Math Newsletters
		  – Count By 10s
		  – Numbers 60–69
		  – I Can Count to 100

2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1). (CCSS: K.CC.A.2)	• Count On
	• Counting Songs
	• Counting Puzzle
	• Dot-to-Dot
		• Counting forward.pdf: Count forward beginning with a given number within the known sequence.
		  – Let's Count On
		  – Toss and Count
		  – Count On by 1
		  – Math Newsletter: Count On
		  – Flashcards

3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). (CCSS: K.CC.A.3)	• Math Books
	• Counting Songs
	• Number Songs
	• Number Counting
	• Number Instruction
	• Counting Puzzle
		• Writing from 0 to 20.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral.
		  – Numbers Practice: 1–20 (one per number)
		  – Numbers 1–5
		  – Add groups
		  – Count on by 1
		  – Number Writing Practice: 0–20 (one per number)

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K.CC.B. Counting & Cardinality: Count to determine the number of objects.		
4. Apply the relationship between numbers and quantities and connect counting to cardinality. (CCSS: K.CC.B.4) a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. (CCSS: K.CC.B.4.a)	• Counting Songs • Number Songs • Number Counting • Order Numbers • One-to-one Correspondence • Make and Count Groups • Number Instruction • Counting Puzzle • Dot-to-Dot	• Object Counting Basics.pdf: When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. – Number Walk
b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. (CCSS: K.CC.B.4.b)	• Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence	• Object Counting Grouping.pdf: Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. – Mixed Up Counting
c. Understand that each successive number name refers to a quantity that is one larger. (CCSS: K.CC.B.4.c)	• Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence • Order Numbers • Count On by 1	• Object Counting Succession.pdf: Understand that each successive number name refers to a quantity that is one larger. – Hoop Addition

5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. (CCSS: K.CC.5)	• Counting Songs
	• Number Songs
	  (See titles at end of document.)
	• Make and Count Groups
	• Number Counting
	• Order Numbers
	• Number Instruction
	• Numbers Review
	• Match Numbers
	• Bug Bits
	• One-to-one Correspondence
		• How many?.pdf: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
		  – Hoop Addition

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K.CC.C. Counting & Cardinality: Compare numbers.		

6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to 10 objects.) (CCSS: K.CC.C.6)	• Book: For the Birds
	• Greater Than, Less Than
	• More Than, Fewer Than
	• More Than
	• Fewer Than
	• Make a Math Story: More Than, Fewer Than
	• Make and Count Groups
		• Greater, less, or equal.pdf: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.
		  – Beans and More
		  – More Than Buttons
		  – Short Names, Long Names
		  – Noodle Necklaces
		  – Grouped Do Count!
		  – More Than, Fewer Than, Equal
		  – Which Has More? 1
		  – Fewer Than
		  – More or Fewer
		  – Which Has More? 2
		  – Greater or Less
		  – More Than/Fewer Than Flashcard Sets

7. Compare two numbers between 1 and 10 presented as written numerals. (CCSS: K.CC.C.7)	• Book: For the Birds
	• Greater Than, Less Than
	• More Than, Fewer Than
	• More Than
	• Fewer Than
	• Order Numbers
	• Make a Math Story: More Than, Fewer Than
		• Comparing numbers.pdf: Compare two numbers between 1 and 10 presented as written numerals.
		  – More or Less Spinner
		  – Catch Me If You Can!
		  – Greater or Less
		  – Less or Greater
		  – Spinner
		  – Board game
		  – Number cards

K.NBT.A. Number & Operations in Base Ten: Work with numbers 11–19 to gain foundations for place value.		

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. (CCSS: K.NBT.A.1)	• Place Value	• Tens and ones.pdf: Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation; understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
		  – Place Value 11–19
		  – Place Value 11–19 (2)

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KINDERGARTEN, STANDARD 2. ALGEBRA AND FUNCTIONS		
K.OA.A. Operations & Algebraic Thinking: Model and describe addition as putting together and adding to, and subtraction as taking apart and taking from, using objects or drawings.		

1. Represent addition and subtraction with objects, fingers, mental images, drawings (drawings need not show details, but should show the mathematics in the problem), sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (CCSS: K.OA.A.1)	• Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction
	• Book: Five Delicious Muffins
	• Make and Count Groups
	• Add Groups
	• Subtract Groups
	• Act Out Addition
	• Act Out Subtraction
		• Represent addition and subtraction with objects. pdf: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.
		  – Addition Cubes
		  – Addition Stories
		  – Going Fishing
		  – Let's Count On
		  – Act it out Stories
		  – Manipulative Stories

2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. (CCSS: K.OA.A.2)	• Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction
	• Book: Five Delicious Muffins
	• Add Groups
	• Subtract Groups
	• Minuends
	• Sums
	• Act Out Addition
	• Act Out Subtraction
	• Flower Story Problems
	• Story Problem Strategies
		• Addition and subtraction word problems.pdf: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
		  – Additions Stories
		  – Act It Out Stories
		  – Manipulative Stories
		  – Edible Stories
		  – One, Two, Three, Show
		  – Circus Subtraction
		  – Partner Subtraction
		  – Farmer's Market
		  – Green and Speckled Frogs
		  – Cars and Trucks Subtraction
		  – Yummy Subtraction
		  – Act Out Addition
		  – Act Out Subtraction
		  – Addition Newsletter
		  – Subtraction Newsletter
		  – Subtraction Flashcards

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K.OA.A. Operations & Algebraic Thinking: Model and describe addition as putting together and adding to, and subtraction as taking apart and taking from, using objects or drawings *continued*.		
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). (CCSS: K.OA.A.3)	• Make and Count Groups • Add Groups • Subtract Groups • Act Out Subtraction • Subtract Doubles	• Decompose numbers.pdf: Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation. – Addition Cubes – Fact Families
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. (CCSS: K.OA.A.4)	• Missing Addends • Count On • Doubles • Doubles Plus 1 • Act Out Addition • Flower Story Problems	• Numbers that make 10.pdf: For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. – How Many More?
5. Fluently add and subtract within 5. (CCSS: K.OA.A.5)	• Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends • Sums • Act Out Addition • Act Out Subtraction	
KINDERGARTEN, STANDARD 3. DATA, STATISTICS, AND PROBABILITY		
K.MD.A. Measurement & Data: Describe and compare measurable attributes.		
1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (CCSS: K.MD.A.1)	• Song: Measuring Plants • Length	• Measurable attributes.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. – Filling Table – Order It Up – Straw Rulers – Measuring Walk – Heavy or Light – Make A Balance – Measurable Attributes

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K.MD.A. Measurement & Data: Describe and compare measurable attributes *continued*.		

2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/ shorter. (CCSS: K.MD.A.2)	• Songs: Savanna Size, Measuring Plants
	• Capacity
	• Length
	• Order Size
	• Big and Little
	• Tall and Short
	• Heavy and Light
	• Size
	• Match
		• Comparing objects.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
		  – Filling Table
		  – Order It Up
		  – Straw Rulers
		  – Measuring Walk
		  – Heavy or Light
		  – Make A Balance
		  – Size Scavenger Hunt
		  – Big and Little Sort
		  – Boxes in a Line
		  – Teddy Bear Line-Up
		  – Magazine Sorting
		  – Tall and Short
		  – Big and Little
		  – Tall and Short
		  – Heavy and Light
		  – Small, Medium, Large
		  – Measuring Length
		  – Measurable Attributes

K.MD.B. Measurement & Data: Classify objects and count the number of objects in each category.		

3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Limit category counts to be less than or equal to 10.) (CCSS: K.MD.B.3)	• Songs: Same and Different; All Sorts of Laundry
	• Book: Buttons, Buttons
	• Match
	• Sort
	• Make and Count Groups
	• Logic Game
		• Classifying objects.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
		  – Let's Sort
		  – Sort

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KINDERGARTEN, STANDARD 4. GEOMETRY		
K.G.A. Geometry: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).		
1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. (CCSS: K.G.A.1)	• Songs: Positioning; Kites; Get Over the Bugs; Shapes, Shapes, Shapes; Up in the Air • Books: The Shape of Things; Imagination Shapes • Position • Over, Under, Above, Below • Inside, Outside, Between • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Diamond • Simple Shapes • Solid Shapes • World Shapes • Above, Below, Next to, On	• Describing objects.pdf: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. – Shapes Scavenger Hunt

2. Correctly name shapes regardless of their orientations or overall size. (CCSS: K.G.A.2)	• Songs: Kites; Shapes, Shapes, Shapes; Up in the Air
	• Books: The Shape of Things; Imagination Shapes
	• Circle, Square, Triangle, Rectangle
	• Star, Semicircle, Octagon, Oval, Diamond
	• Simple Shapes
	• Solid Shapes
	• World Shapes
		• Shape recognition.pdf: Correctly name shapes regardless of their orientations or overall size.
		  – Shapes Scavenger Hunt
		  – Shapes and Positioning
		  – Shapes Flashcards

3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). (CCSS: K.G.A.3)	• Solid Shapes • Space Shapes • Simple Shapes	• Two-dimensional shapes.pdf: Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). – Shapes and Positioning
K.G.B. Geometry: Analyze, compare, create, and compose shapes.		
4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). (CCSS: K.G.B.4)	• Song: Corners and Sides • Simple Shapes • Solid Shapes • Space Shapes • Congruence • Tangrams • Similar Figures	• Compare shapes.pdf: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). – Comparing Shapes

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K.G.B. Geometry: Analyze, compare, create, and compose shapes *continued*.		
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. (CCSS: K.G.B.5)	• Geoboard • Tangrams	• Model shapes.pdf: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. – Building Shapes
6. Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?" (CCSS: K.G.B.6)	• Geoboard • Tangrams	• Form larger shapes.pdf: Compose simple shapes to form larger shapes. – Combining Shapes
FIRST GRADE, STANDARD 1. NUMBER AND QUANTITY		
1.NBT.A. Number & Operations in Base Ten: Extend the counting sequence.		
1. 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. (CCSS: 1.NBT.A.1)	• Song: Counting On • Books: Painting by Number; Circus 20; Hooray, Hooray for the One Hundredth Day! • Count On • Number Chart	• Count to 120.pdf: 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. – Mystery Numbers – I Can Write Numbers to 99 – Numbers 20–29; 30–39; 40–49; 50–59; 60–69 – Counting to 89 – Counting Charts: – I Can Count to 50; 100; 99; 120
1.NBT.B. Number & Operations in Base Ten: Understand place value.		
2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: (CCSS: 1.NBT.B.2) a. 10 can be thought of as a bundle of ten ones — called a "ten." (CCSS: 1.NBT.B.2.a)	• Song: Place Value • Place Value of 2-digit Numbers • Expanded Notation • Add with Manipulatives	• Tens as a bundle of ones.pdf: 10 can be thought of as a bundle of ten ones—called a "ten." – Popsicles to Ten

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1.NBT.B. Number & Operations in Base Ten: Understand place value.		

b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. (CCSS: 1.NBT.B.2.b)	• Song: Place Value
	• Place Value of 2-digit Numbers
	• Expanded Notation
	• Add with Manipulatives
		• 11-19 broken down.pdf: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
		  – Toss It
		  – Make a Number
		  – Numbers Flashcards
		  – Numbers 10–19
		  – More Numbers 10–19

c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). (CCSS: 1.NBT.B.2.c)	• Expanded Notation • Place Value • Place Value of 2-digit Numbers	• Ten groupings.pdf: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). – Toss It

3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (CCSS: 1.NBT.B.3)	• Place Value
	• Greater Than, Less Than (2-digit Numbers)
	• You Be the Teacher
		• Compare two-digit numbers.pdf: Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
		  – More or Less Spinner
		  – Catch Me if You Can!
		  – What Are You Looking For?
		  – Two-Pile Sort

1.NBT.C. Number & Operations in Base Ten: Use place value understanding and properties of operations to add and subtract.		

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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 and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (CCSS: 1.NBT.C.4)	• Addition
	• Add Tens
	• Doubles
	• Doubles Plus 1
	• Add with Manipulatives
	• Add Vertical Squares
	• Add with Beads
	• Addition and Subtraction Relationship
	• Add with Regrouping Concept
	• Add 2-digit and 1-digit Numbers with Regrouping
	• Add 2-digit Numbers without Regrouping
	• Add 2-digit Numbers with Regrouping
	• You Be the Teacher
		• Adding within 100.pdf: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
		  – Drawing Tens
		  – Beans, Beans, and More Beans
		  – The Kingdom of Popsicle Stick-Filled Purses
		  – Straws and Macaroni
		  – Bean Addition
		  – Newsletter
		  – Adding Tens and Ones
		  – Color Adds Up
		  – Cookies and Milk!
		  – Addition of Two-Digit Numbers
		  – Addition and Subtraction of Large Numbers
		  – 1 set of flashcards

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1.NBT.C. Number & Operations in Base Ten: Use place value understanding and properties of operations to add and subtract *continued*.		

5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (CCSS: 1.NBT.C.5)	• Song: Skip Counting
	• Book: Navajo Beads
	• Add
	• Subtract
	• Add Tens
	• Subtract Tens
	• Skip Count by 10
	• Number Chart
		• Ten more or less.pdf: Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
		  – Ten-O
		  – Toss It
		  – Make a Number
		  – Subtract 10
		  – Flashcards
		  – Bingo
		  – Addition of Tens

6. Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), 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 and explain the reasoning used. (CCSS: 1.NBT.C.6)	• Subtraction
	• Subtraction Sentences
	• Subtract Tens
	• Subtraction Patterns
	• Subtract
	• Place Value
	• Addition and Subtraction Relationship
	• Use Manipulatives
	• You Be the Teacher
		• Subtracting in 10s.pdf: Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90.
		  – Ten-O
		  – Bingo
		  – Subtract Multiples of 10

FIRST GRADE, STANDARD 2. ALGEBRA AND FUNCTIONS		
1.OA.A. Operations & Algebraic Thinking: Represent and solve problems involving addition and subtraction.		

1. 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. (CCSS: 1.OA.A.1)	• Songs: Fact Families; Doubles
	• Book: Facts About Families
	• Addition and Subtraction Fact Families
	• Addition and Subtraction Relationship
	• Doubles
	• Subtract Doubles
	• Problem Solving Strategy
	• Story Problem Strategies
		• Word problems using subtraction within 20.pdf: 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.
		  – Guess and Check
		  – Model the Story

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1.OA.A. Operations & Algebraic Thinking: Represent and solve problems involving addition and subtraction *continued*.		
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. (CCSS: 1.OA.A.2)	• Story Problem Strategies • Problem Solving Strategy • Doubles	• Word problems adding 3 numbers.pdf: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. – Draw a Picture
1.OA.B. Operations & Algebraic Thinking: Understand and apply properties of operations and the relationship between addition and subtraction.		
3. Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.) (CCSS: 1.OA.B.3)	• Addition and Subtraction Relationship • Addition and Subtraction Fact Families • Subtraction Patterns • Commutative Property of Addition • Kingdom of Counting	• Strategies to add and subtract.pdf: Apply properties of operations as strategies to add and subtract. – Adding and Subtracting Bugs – Concentration – Related Facts
4. Understand subtraction as an unknown-addend problem. For example, subtract 10 − 8 by finding the number that makes 10 when added to 8. (CCSS: 1.OA.B.4)	• Missing Addends • Subtraction Patterns • Addition and Subtraction Fact Families • Kingdom of Counting • Missing Addends	• Understand subtraction as an unknown addend problem.pdf: Understand subtraction as an unknown-addend problem. Add and subtract within 20. – Write each subtraction problem as an addition problem and solve it.
1.OA.C. Operations & Algebraic Thinking: Add and subtract within 20.		
5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). (CCSS: 1.OA.C.5)	• Song: Counting On • Books: Circus 20; Painting by Number; Jump Rope Rhymes • Skip Count by 2 • Count On • Make and Count Groups • Add Groups • Subtract Groups	• Relate counting to addition and subtraction.pdf: Relate counting to addition and subtraction. – Skip Counting Chant – Jump Rope Counting – Related Facts – Count by 2a; 5s; 10s

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1.OA.C. Operations & Algebraic Thinking: Add and subtract within 20 *continued*.		

6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 − 4 = 13 − 3 − 1 = 10 − 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 − 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). (CCSS: 1.OA.C.6)	• Songs: Fact Families; Counting On
	• Books: Facts about Families; Circus 20; Painting by Number
	• Addition and Subtraction Fact Families
	• Addition Sentences
	• Subtraction Sentences
	• Commutative Property of Addition
	• Addition and Subtraction Relationship
	• Missing Addends
	• Missing Minuends and Subtrahends
	• Add 3 One-digit Numbers
	• Subtraction Patterns
		• Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.
		  – The Three Little Bears
		  – Fact Family Bingo
		  – A Graph of Fact Families
		  – Bean Facts
		  – Draw a Picture
		  – Addition
		  – Number Pyramid
		  – Subtraction Sentences
		  – Model the Story
		  – Fact Families
		  – Add _ and 1–5; _ and 6–10
		  – Order Property of Addition
		  – Add Doubles +1 to 11
		  – Add Doubles to 20
		  – Add Doubles +1 to 21)
		  – Make 10
		  – Subtract _ from
		  – Subtract
		  – Subtraction Patterns
		  – Fact Families to 10; to 20
		  – Add and Subtract Doubles to 10; Doubles to 20
		  – Sets of flashcards:
		  – Addition—Horizontal; Vertical
		  – Subtraction—Horizontal; Vertical

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.OA.D. Operations & Algebraic Thinking: Work with addition and subtraction equations.		

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$. (CCSS: 1.OA.D.7)	• Song: Fact Families
	• Book: Facts About Families
	• Addition and Subtraction Fact Families
	• Addition and Subtraction Relationship
	• Commutative Property of Addition
	• Addition Sentences
	• Subtraction Sentences
	• Greater Than, Less Than
	• More Than, Fewer Than
		• Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.
		  – Show Me!
		  – Tricky Total
		  – Domino Addition
		  – Domino Subtraction
		  – Playground Fact Snake

8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \_ - 3$, $6 + 6 = \_$. (CCSS: 1.OA.D.8)	• Addition Sentences • Subtraction Sentences • Addition and Subtraction Fact Families • Missing Addends • Missing Minuends and Subtrahends	
FIRST GRADE, STANDARD 3. DATA, STATISTICS, AND PROBABILITY		
1.MD.A. Measurement & Data: Measure lengths indirectly and by iterating length units.		

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object. (CCSS: 1.MD.A.1)	• Length
	• Nonstandard Units of Length
		• Order by length.pdf: Order three objects by length; compare the lengths of two objects indirectly by using a third object.
		  – Estimating Length
		  – A Fruit and Vegetable Measure

2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. (CCSS: 1.MD.A.2)	• Length
	• Nonstandard Units of Length
	• Problem Solving
		• Length Measurement.pdf: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.
		  – Measures of Me
		  – Measure a Handful
		  – Estimating Length
		  – A Fruit and Vegetable
		  – Measure Up!
		  – Inches/Centimeters Rulers

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.MD.B. Measurement & Data: Tell and write time.		

3. Tell and write time in hours and half-hours using analog and digital clocks. (CCSS: 1.MD.B.3)	• Song: Clock Hands
	• Books: Mr. Romano's Secret: A Time Story; How Long is a Minute?
	• Tell Time to the Hour
	• Tell Time to the Half-Hour
	• Compare Minutes to Hours
	• Order Numbers on a Clock
		• Hours and Half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks.
		  – What Comes After, Before, Or Between?
		  – Make Your Own Clock
		  – Learning to Tell Time
		  – Matching Time
		  – What Numbers are Missing?
		  – What Time Is It?
		  – Time of Day
		  – Clock flashcards

1.MD.C. Measurement & Data: Represent and interpret data.		

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (CCSS: 1.MD.C.4)	• Songs: Tallying; Graphing
	• Books: One More Cat; Painting by Number
	• Tally Marks
	• Graphs
	• Make a Table
		• Data Categorization.pdf: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
		  – Ice Cream Sundae
		  – Make A Real Object Graph
		  – Make a Weather Bar Graph
		  – Weather Flashcards
		  – Our Favorite Foods
		  – Make a Graph
		  – Make a table
		  – How Many?
		  – Bugs!
		  – Use Graphs and Tables
		  – How Big Is Your Family?

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
FIRST GRADE, STANDARD 4. GEOMETRY		
1.G.A. Geometry: Reason with shapes and their attributes.		
1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. (CCSS: 1.G.A.1)	• Songs: Corners and Sides; Kites • Geoboard • Space Shapes	• Attributes.pdf: Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes. – Sorting Shapes
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names, such as "right rectangular prisms.") (CCSS: 1.G.A.2)	• Song: Kites • Space Shapes • Geoboard • Tangrams	

3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. (CCSS: 1.G.A.3)	• Song: Fractions
	• Book: Halves and Fourths and Thirds
	• Equal-part Fractions
	• Label Parts of Fractions
		• Equal shares.pdf: Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.
		  – Make It Equal
		  – Fraction Friends
		  – Fraction Train
		  – Halves, Thirds, Fourths
		  – Equal Parts

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 1. NUMBER AND QUANTITY		
2.NBT.A. Number & Operations in Base Ten: Understand place value.		
1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: (CCSS: 2.NBT.A.1) a. 100 can be thought of as a bundle of ten tens — called a "hundred." (CCSS: 2.NBT.A.1.a)	• Song: Place Value • Place Value of 3-digit Numbers	• Thinking of 100 as a bundle of ten 10s.pdf: 100 can be thought of as a bundle of ten tens—called a "hundred." – The Kingdom of Popsicle Stick-Filled Purses
b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). (CCSS: 2.NBT.A.1.b)	• Song: Place Value • Place Value of 3-digit Numbers	• Grouping hundreds: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). – My Three-Digit Numbers
2. Count within 1000; skip-count by 5s, 10s, and 100s. (CCSS: 2.NBT.A.2)	• Song: Skip Counting • Skip Count • Skip Count by 10 • Skip Count by 5 • Number Sequences and Patterns	• Counting within 1000.pdf: Count within 1,000; skip-count by 5s, 10s, and 100s. – Chart Patterns – My 199 Picture; 200 Picture; 299 Picture; 300 Picture; 399 Picture; 400 Picture; 499 Picture; 500 Picture; 599 Picture; 600 Picture; 699 Picture; 700 Picture – 900 Chart
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (CCSS: 2.NBT.A.3)	• Sequences of 2-digit Numbers • Sequences of 3-digit Numbers • Number Chart • Place Value	• Read and write numbers to 1000.pdf: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. – Cube Trails – Race for a Flat – High/Low Number Cube Throw – Lucky Five

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.NBT.A. Number & Operations in Base Ten: Understand place value *continued*.		

4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. (CCSS: 2.NBT.A.4)	• Greater Than, Less Than (3-digit Numbers)
	• Place Value of 3-digit Numbers
		• Less than, equal to, or greater than.pdf: Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
		  – More or Less
		  – The Hands Have It!
		  – Larger or Smaller?
		  – Comparing Number Cards
		  – Number Cards
		  – <, >, = Cards
		  – Greater Than, Less Than, Equal To

2.NBT.B. Number & Operations in Base Ten: Use place value understanding and properties of operations to add and subtract.		

5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (CCSS: 2.NBT.B.5)	• Place Value
	• Addition and Subtraction Relationship
	• Commutative Properties of Addition
	• Addition
	• Subtraction
	• Add without Regrouping
	• Add with Regrouping
	• Subtract without regrouping
	• Subtract with Regrouping
		• Adding or subtracting within 100.pdf: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
		  – Addition Flashcards
		  – Addition of Two-Digit Numbers
		  – Tic Tac Toe
		  – Subtraction of Two-Digit Numbers

6. Add up to four two-digit numbers using strategies based on place value and properties of operations. (CCSS: 2.NBT.B.6)	• Add Two-digit Numbers with Regrouping • Commutative Properties of Addition • Place Value	• Adding four 2-digit numbers.pdf: Add up to four two-digit numbers using strategies based on place value and properties of operations. – Add Four Two-Digit Numbers

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.NBT.B. Number & Operations in Base Ten: Use place value understanding and properties of operations to add and subtract *continued*.		

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 or subtracting 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. (CCSS: 2.NBT.B.7)	• Place Value
	• Addition and Subtraction Relationship
	• Commutative Properties of Addition
	• Addition
	• Subtraction
	• Add without Regrouping
	• Add with Regrouping
	• Subtract without regrouping
	• Subtract with Regrouping
	• Act Out Addition
	• Act Out Subtraction
		• Add and subtract within 1000.pdf: Add and subtract within 1,000, 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 or subtracting 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.
		  – Choose and Add
		  – Mix and Match Addition
		  – Expanded Subtraction
		  – Subtracting Repeats
		  – 999
		  – Prediction
		  – Up and Away
		  – Regrouping Treasure Hunt
		  – Play Ball
		  – Squirrel Facts
		  – Number Cards

8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. (CCSS: 2.NBT.B.8)	• Mental Math Games • Skip Count • Place Value • Number Chart • Number Patterns	• Mentally adding or subtracting 10 or 100.pdf: Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. – Spin and Solve (with spinner and numbers cards)

9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.) (CCSS: 2.NBT.B.9)	• Addition
	• Subtraction
	• Add with Regrouping Concept
	• Subtract with Regrouping Concept
	• Place Value
	• Number Line
	• Addition and Subtraction Relationship
	• You Be the Teacher
	• Commutative Properties of Addition
	• Act Out Addition
	• Act Out Subtraction
		• Explaining addition and subtraction strategies.pdf: Explain why addition and subtraction strategies work, using place value and the properties of operations.
		  – Cube Trails
		  – Race for a Flat
		  – High/Low Number Cube Throw
		  – Lucky Five
		  – Hundreds, Tens, Ones Chart
		  – Numbers Cards

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 2. ALGEBRA AND FUNCTIONS		
2.OA.A. Operations & Algebraic Thinking: Represent and solve problems involving addition and subtraction		

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. (see Appendix, Table 1) (CCSS: 2.OA.A.1)	• Book: Painting by Number
	• Addition
	• Subtraction
	• Problem Solving Strategies
	• Story Problem Strategies
	• Missing Addends and Subtrahends
	• Subtraction Sentences
	• Addition and Subtraction Facts
		• Solving one and two step word problems within 100. pdf: 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.
		  – Animal Math
		  – Picture Problems
		  – Act it Out
		  – Guess and Check

2.OA.B. Operations & Algebraic Thinking: Add and subtract within 20.		

2. Fluently add and subtract within 20 using mental strategies. (See 1.OA.C.6 for a list of strategies.) By end of Grade 2, know from memory all sums of two one-digit numbers. (CCSS: 2.OA.B.2)	• Songs: Fact Families; Doubles
	• Subtraction Patterns
	• Addition Facts to 2
		• Adding and subtracting within 20.pdf: Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers.
		Sets of flashcards:
		  – Addition—Horizontal; Vertical
		  – Subtraction—Horizontal; Vertical
		  – Addition and subtraction—Horizontal and Vertical

2.OA.C. Operations & Algebraic Thinking: Work with equal groups of objects to gain foundations for multiplication.		

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. (CCSS: 2.OA.C.3)	• Song: Odd Todd and Even Steven
	• Skip Count by 2
	• Addition Facts
		• Odd and even recognition.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members.
		  – Missing Patterns
		  – Counting by 2s
		  – What's My Number?

4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. (CCSS: 2.OA.C.4)	• Addition • Multiply Using Repeated Addition • Multiply Using Arrays	

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 3. DATA, STATISTICS, AND PROBABILITY		
2.MD.A. Measurement & Data: Measure and estimate lengths in standard units.		
1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. (CCSS: 2.MD.A.1)	• Song: Measuring Plants • Book: Birds at My House • Length • Measurement Tools • Standard Units of Length	• Measurement tools.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. – Ready, Set, Measure – Treasure Hunt – Centimeter Ruler – Inch Ruler – Let's Measure in Centimeters! – Let's Measure in Inches!
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. (CCSS: 2.MD.A.2)	• Length • Standard Units of Length • Measurement Tools	• Measuring the same object two ways.pdf: 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. – Ready, Set, Measure
3. Estimate lengths using units of inches, feet, centimeters, and meters. (CCSS: 2.MD.A.3)	• Song: Measuring Plants • Length • Standard Units of Length • Measurement Tools	• Estimating lengths.pdf: Estimate lengths using units of inches, feet, centimeters, and meters. – Ready, Set, Measure – Treasure Hunt – Let's Measure in Centimeters! – Let's Measure in Inches! – Measuring Perimeter
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. (CCSS: 2.MD.A.4)	• Length • Standard Units of Length	• Measure length.pdf: Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. – Ready, Set, Measure – Treasure Hunt

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.MD.B. Measurement & Data: Relate addition and subtraction to length.		

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. (CCSS: 2.MD.B.5)	• Book: Yangshi's Perimeter
	• Story Problem Strategies
	• Addition
	• Subtraction
	• Length
	• Standard Units of Length
		• Add and subtract within 100. pdf: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		  – Perimeter Walkabout
		  – How Far Around?
		  – Measuring Perimeter

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. (CCSS: 2.MD.B.6)	• Number Line • Length	
2.MD.C. Measurement & Data: Work with time and money.		

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (CCSS: 2.MD.C.7)	• Songs: Telling Time; Clock Hands
	• Tell Time
	• Tell Time to Five Minutes
	• Tell Time to the Quarter Hour
	• Tell Time to the Minute
	• Tell Time to the Hour
	• Tell Time to the Half-hour
	• You Be the Teacher
		• Tell and write time.pdf: Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
		  – Matching Clocks
		  – Cartoon Captions
		  – Time to 5 Minutes

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.MD.C. Measurement & Data: Work with time and money *continued*.		

8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have two dimes and three pennies, how many cents do you have? (CCSS: 2.MD.C.8)	• Songs: Money; Save Your Pennies
	• Book: Bugs For Sale
	• Coin Identification
	• Coin Value
	• Quarters
	• Count Dimes, Nickels, and Pennies
	• Count Quarters, Dimes, Nickels, and Pennies
	• Count Nickels and Pennies or Dimes and Pennies
	• Make Change
	• Count Coins
	• Count Bills and Coins
	• Equivalent Sums of Money
	• Story Problem Strategies
	• You Be the Teacher
		• Money word problems.pdf: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.
		  – Supermarket Hunt
		  – Shopping for My Family
		  – Money Combinations
		  – Money Sums
		  – Pizza Parlor
		  – How Much Back?
		  – Coin Count
		  – Bills and Coins
		  – Let's Count Coins
		  – Money Addition
		  – Change Is Good!
		  – Make 45¢

2.MD.D. Measurement & Data: Represent and interpret data.		

9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. (CCSS: 2.MD.D.9)		• Generating measurement data.pdf: Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
		  – Measuring Inches
		  – Ready, Set, Measure
		  – Let's Measure in Centimeters!
		  – Let's Measure in Inches!

10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems (see Appendix, Table 1) using information presented in a bar graph. (CCSS: 2.MD.D.10)	• Song: Graphing
	• Graphing
	• Bar Graphs
	• Picture Graphs
	• Use Graphs and Tables
	• Story Problem Strategies
		• Graphs.pdf: Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
		  – Questions and Answers
		  – Library Book Survey
		  – Playground Survey
		  – Rock Collections
		  – Use Graphs and Tables

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 4. GEOMETRY		
2.G.A. Geometry: Reason with shapes and their attributes.		

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (CCSS: 2.G.A.1)	• Song: Kites
	• Geoboard
	• Songs: Shapes, Shapes, Shapes; Corners and Sides
	• Book: The Shape of Things
	• Space Shapes
	• World Shapes
		• Draw shapes.pdf: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
		  – Making Shapes
		  – Shapes Review

2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. (CCSS: 2.G.A.2)	• Song: Fractions • Fractions of Regions • Story Problem Strategies • You Be the Teacher	

3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. (CCSS: 2.G.A.3)	• Song: Fractions
	• Books: Halves and Fourths and Thirds; The Fraction Twins
	• Fractions
	• Label Parts of Fractions
	• Geoboard
	• Fractions of Regions
	• Fractions of Groups
	• You Be the Teacher
		• Fractions.pdf: Partition circles and rectangles into two, three, or four equal shares, de-scribe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
		  – Frenzied Fraction Fun
		  – Fabulous Fractions

SCIENCE		
KINDERGARTEN, STANDARD 1. PHYSICAL SCIENCE		
1. Pushes and pulls can have different strengths and directions, and can change the speed or direction of an object's motion or start or stop it.		
a. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. (K-PS2-1)	• Song: Push and Pull • Book: Mr. Mario's Neighborhood • Push and Pull	• Learning Together: How It Works
b. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. (K-PS2-2)	• Song: Push and Pull • Push and Pull	

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2. Sunlight affects the Earth's surface.		
a. Make observations to determine the effect of sunlight on Earth's surface. (K-PS3-1)	• Songs: Water; Plants Are Growing; Sun Blues • Sun • Water	
b. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. (K-PS3-2)	• Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
KINDERGARTEN, STANDARD 2. LIFE SCIENCE		
1. To live and grow, animals obtain food they need from plants or other animals, and plants need water and light.		
a. Use observations to describe patterns of what plants and animals (including humans) need to survive. K-LS1-1)	• Song: Water • Book: Mela's Water Pot • Sun • Plants • Water	• More to Explore Experiment: Water for Plants • Learning Together: Green and Growing
KINDERGARTEN, STANDARD 3. EARTH AND SPACE SCIENCE		
1. Patterns are observed when measuring the local weather, including how humans and other organisms impact their environment.		
a. Use and share observations of local weather conditions to describe patterns over time. (K-ESS2-1)	• Song: Seasons • Book: That's What I Like: A Book About Seasons • Calendar/Graph Weather • Weather Patterns • Clouds • Spring • Summer • Fall • Winter	• Learning Together: Weather; The Weather Around Us • Weather Cards
b. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. (K-ESS2-2)	• Books: Winter Snoozers; Birds at My House; The Old Maple Tree	

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2. Plants and animals meet their needs in their habitats and impact one another; people can prepare for severe weather.		
a. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. (K-ESS3-1)	• Song: Four Ecosystems • Book: Where in the World Would You Go Today? • Oceans • Mountains • Deserts • Rainforests	• Learning Together: Our Earth
b. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. (K-ESS3-2)	• Songs: Precipitation; Storms • Book: Whatever the Weather • Weather Tools • Calendar/Graph Weather	
c. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. (K-ESS3-3)	• Songs: Conservation; Pollution Rap • Pollution and Recycling • Care of Water • Care of Earth	• More to Explore Experiment: Recycling • Learning Together: Our Earth
FIRST GRADE, STANDARD 1. PHYSICAL SCIENCE		
1. Sound can make matter vibrate and vibrating matter can make sound.		
a. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. (1-PS4-1)	• Song: Sound • Book: What Sounds Say • Sound Waves	• More to Explore Experiment: Sound
b. Make observations to construct an evidence-based account that objects can be seen only when illuminated. (1-PS4-2)	• Book: Lightning Bugs	
c. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light. (1-PS4-3)	• Book: My Family Campout • Light Properties • Properties of Light	
d. Use tools and materials to design and build a device that used light or sound to solve the problem of communicating over a distance. (1-PS4-4)	• Song: Inventing • Books: I Want to Be a Scientist Like Thomas Edison; Inventions All Around	

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
FIRST GRADE, STANDARD 2. LIFE SCIENCE		
1. All organisms have external parts that they use to perform daily functions.		
a. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. (1-LS1-1)	• Books: I Wish I Had Ears Like a Bat; Animal Bodies	
b. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. (1-LS1-2)	• Song: Animal Bodies • Animal Behavior • Animal Bodies	
2. Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind		
a. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. (1-LS3-1)	• Books: George and Jack; A Seed Grows • Build Knowledge: Mine	• More to Explore Experiment: Traits
FIRST GRADE, STANDARD 3. EARTH AND SPACE SCIENCE		
1. Patterns of movement of the sun, moon and stars as seen from Earth can be observed, described and predicted.		
a. Use observations of the sun, moon, and stars to describe patterns that can be predicted. (1-ESS1-1)	• Songs: The Moon; Sun Blues • Books: Moon Song; Star Pictures; My Family Campout • Sun • Moon • Constellations	• More to Explore Experiment: The Moon • Learning Together: The Sky Above Us
b. Make observations at different times of year to relate the amount of daylight to the time of year. (1-ESS1-2)	• Sun • Spring • Summer • Fall • Winter	

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 1. PHYSICAL SCIENCE		
1. Matter exists as different substances that have observable different properties.		
a. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. (2-PS1-1)	• Book: Warm Soup for Dedushka • Changes in Matter • Movement of Heat • States of Water • Materials	
b. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. (2-PS1-2)	• Book: Warm Soup for Dedushka • Heat Movement • Movement of Heat • Heat Experiment	
c. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. (2-PS1-3)	• Geoboard • Tangrams	
d. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. (2-PS1-4)	• Book: Warm Soup for Dedushka • Changes in Matter • Movement of Heat	
SECOND GRADE, STANDARD 2. LIFE SCIENCE		
1. Plants depend on water and light to grow and on animals for pollination or to move their seeds around.		
a. Plan and conduct an investigation to determine if plants need sunlight and water to grow. (2-LS2-1)	• Song: Plants Are Growing • Sun • Water	• More to Explore Experiment: Light for Plants
b. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. (2-LS2-2)	• Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
2. A range of different organisms lives in different places.		
a. Make observations of plants and animals to compare the diversity of life in different habitats. (2-LS4-1)	• Songs: Animal Bodies; Four Ecosystems • Books: Animal Bodies; Where in the World Would You Go Today? • Ecosystems • Animal Bodies • Animal Behavior	• Learning Together: Places on Earth

COLORADO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SECOND GRADE, STANDARD 3. EARTH AND SPACE SCIENCE		
1. Some events on Earth occur quickly; others can occur very slowly.		
a. Use information from several sources to provide evidence that Earth events can occur quickly or slowly. (2-ESS1-1)	• Songs: The Four Seasons; Rock Cycle • Books: That's What I Like: A Book About Seasons; Whatever the Weather; Fossils Under Our Feet • Rock Cycle • Fossils • Spring • Summer • Fall • Winter • Water	• More to Explore Experiment: Rocks
2. Wind and water can change the shape of the land; models can show the shape and these changes to the land.		
a. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. (2-ESS2-1)	• Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
b. Develop a model to represent the shapes and kinds of land and bodies of water in an area. (2-ESS2-2)	• Songs: Water; Precipitation; Water Is All Around • Water Sources • Water • Water Cycle • Care of Water • Oceans	
c. Obtain information to identify where water is found on Earth and that it can be solid or liquid. (2-ESS2-3)	• Songs: Water; Uses of Water; Precipitation; Water Is All Around • Water Sources • Water • Water Cycle • Care of Water • States of Water • Heat Changes Water	

Waterford.org
CURRICULUM

PRE-MATH & SCIENCE

Math Books

One Day on the Farm; Two Feet; Look for Three; Four Fine Friends; Grandpa's Great Athlete: A Book About 5; Hide and Seek Six; Just Seven; Eight at the Lake; 9 Cat Night; Ten for My Machine; The Search for Eleven; The Tasty Number Twelve; Thirteen in My Garden; Fourteen Camel Caravan; Fifteen on a Spring Day; Dinner for Sixteen; The Seventeen Machine; Eighteen Carrot Stew; Nineteen Around the World; Twenty Clay Children; Poor Wandering 1; Snowy Twos Day; 1, 2, 3, 4 in the Jungle; Give Me 5; Suzy Ladybug; 7 Train; 8 Octopus Legs; Highway 9; 10 Astronauts; When I Saw 11; I Love the Number 12; 13 Clues; 14 Camels; Fun 15; 16 Ants; Counting to 17; 18 Carrot Stew; 19 Around the World; 20 Fingers and Toes

Science Books

That's What I Like: A Book about Seasons; I Want to Be a Scientist Like Jane Goodall; Mr. Mario's Neighborhood; Mela's Water Pot; I Want to Be a Scientist Like Wilbur and Orville Wright; Follow the Apples!; I Want to Be a Scientist Like George Washington Carver; Guess What I Am; Where in the World Would You Go Today?; Star Pictures; I Wish I Had Ears Like a Bat; Creepy Crawlers

Counting Songs

Asian Counting, Marching Band Counting, Flower Counting, Country Counting, Dixieland Counting, Funky Counting, Reggae Counting, Salsa Counting, Techno Counting, Bagpipe Counting, Counting on the Mountain

Number Songs

Count to 31; Hotel 100; Poor Wandering 1; Snowy Twos Day; 1, 2, 3, 4 in the Jungle; Give Me 5; Suzy Ladybug; 7 Train; 8 Octopus Legs; Highway 9; 10 Astronauts; When I Saw 11; I Love the Number 12; 13 Clues; 14 Camels; Fun 15; 16 Ants; Counting to 17; 18 Carrot Stew; 19 Around the World; 20 Fingers and Toes

BASIC MATH & SCIENCE

Math & Science Books

One More Cat; Can You Guess? A Story for Two Voices; I Want to Be a Scientist Like Carl Linnaeus; I Want to Be a Scientist Like Antoni van Leeuwenhoek; Whatever the Weather; I Want to Be a Mathematician Like Sophie Germain; Water Is All Around; Mr. Romano's Secret: A Time Story; A Seed Grows; How Long is a Minute?; Marty's Mixed-up Mom; I Want to Be a Scientist Like Louis Pasteur; Pancakes Matter; Jump Rope Rhymes; Facts About Families; Fifteen Bayou Band; Hooray, Hooray for the One Hundredth Day!; Symmetry and Me; Animal Bodies; Everybody Needs to Eat; The Circus Came to Town; I Want to Be a Mathematician Like Thales; Bugs for Sale; Heads or Tails; Your Backyard; The Birds, the Beasts and the Bat; Halves and Fourths and Thirds; We All Exercise; Circus 20; Red Rock, River Rock; Painting by Number; I Want to Be a Scientist Like Joanne Simpson; Navajo Beads; Where in the World Would You Go Today?; I Want to Be a Scientist Like Wilbur and Orville Wright

FLUENT MATH & SCIENCE

Math & Science Books

The Snow Project; Chloe's Cracker Caper; What Sounds Say; Fossils Under Our Feet; The Boonville Nine; I Want to Be a Scientist Like Alexander von Humboldt; I Want to Be a Scientist Like Marie Curie; I Want to Be a Scientist Like Stephen Hawking; George and Jack; The Old Maple Tree; A Dinosaur's First Day; I Want to Be a Scientist Like Isaac Newton; My Family Campout; I Want to Be a Scientist Like Thomas Edison; Warm Soup for Dedushka; How Did the Chicken Cross the Road?; Inventions All Around; The Beginning of Numbers; I Want to Be a Mathematician Like Ada Byron Lovelace; Lightning Bells; Tyrannosaurus X 1; Halves and Fourths and Thirds; Navajo Beads; Red Rock, River Rock; I Want to Be a Mathematician Like Srinivasa Ramanujan; The Fraction Twins; Yangshi's Perimeter; I Want to Be a Mathematician Like Archimedes; Birds at My House; Painting by Number; The Fable Fair

SUPPORT

Professional Services offers a continuum of customizable services. Learn more here.

CONTINUAL DEVELOPMENT

As a nonprofit research institute, Waterford.org is continually developing resources with the latest research findings. Please note that this correlation is accurate as of the date on the cover.

SPANISH FAMILY ENGAGEMENT RESOURCES

All Waterford books and many of the resources available to families at mentor.waterford.org can be found in Spanish or with Spanish support.

SONGS

Beginning Math Songs

Odd Todd and Even Steven; Salsa Counting; On the Bayou—Addition; Subtract Those Cars; More Than, Fewer Than; A Nice Addition; Marching Band Counting; Doubles 1–5; Multiply by 0

Nursery Songs and Rhymes

Rhyming Words; A: The Apple Tree; B: Bluebird, Bluebird; C: Pat-a-Cake; D: Hey Diddle, Diddle; E: One Elephant Went Out to Play; F: The Farmer in the Dell; G: Ten Little Goldfish; H: All the Pretty Little Horses; I: Mother, Mother, I Am Ill; J: Jack and Jill; K: Three Little Kittens; L: Mary Had a Little Lamb; M: Little Miss Muffett; N: I Touch My Nose Like This (Spanish); O: Polly, Put the Kettle On; P: This Little Pig; Q: Quack, Quack, Quack; R: Little Rabbit (Chinese); S: Eensy, Weensy Spider; T: Tortillas, Tortillas (Spanish); U: The Bus; V: My Valentine; W: Wee Willie Winkie; X: A-hunting We Will Go; Y: Yankee Doodle; Z: The Zulu Warrior

Beginning Reading Songs

Comma, Comma, Comma; Homophone Monkey; Antonym Ant; Apples and Bananas; Old MacDonald's Vowels; ABC Show and Tell Sounds; ABC Tongue Twisters; ABC Picture Sounds; Sheep in the Shadows; C-K Rap; S Steals the Z; Blends; Blicky Licky Land; Apostrophe Pig; Capital Letters—Days; Chip Chop; Adjectives Describe; Lazy Letter Q; Nouns; Verbs; Adverbs; Irregular Verbs; Preposition Ship; Verbs that Link; Consonants; Pronouns, Sneaky Magic E; Silent Letters—G-H; Silent Letters—W; Drop Magic E; Bossy Mr. R; P-H and G-H Say Fff; Schwa Sound; Double the Fun; Strange Spelling; More Than One; Reading Detective—Peek at the Story

Many of these songs are available on the Waterford.org YouTube channel.

WEEKLY HOMELINK NEWSLETTERS

Weekly newsletters (28 in all) are available for teachers to share with families. The newsletters explain what children are learning during the week and provide resources and activities to involve families.

MATH HOMELINK NEWSLETTERS

Match, Position, Shapes, Counting, Patterns Sort, Size, Number Sense (1–10), Order (1–10), Count On, Measurement (length), Count Down, Addition (10), Numbers 11–15, Numbers 16–20

SCIENCE HOMELINK NEWSLETTERS

The World Around Us (5 senses), Living Things (living v. non-living), Plants, Vertebrates, Invertebrates, The Sky Above Us (sun, moon, stars), Our Earth (recycle, ecosystems), How it Works (push/pull, solid/liquid, magnets, materials)

READING HOMELINK NEWSLETTERS

Alphabet Knowledge

Comprehension and Vocabulary

Sum Up: Remember Order, Sum Up: Remember Details, Peek at the Story, Guess and Check, Connect to Me, Build Knowledge

Readiness Skills Letters

Naming Parts of the Body; First, Next, Last; One-to-One Correspondence; Opposites; Look at Details (identify same and different)

Phonological Awareness Letters

What Is Rhyming?, Which Words Rhyme?, Sentences Are Made Up of Words, Making Compound Words, Breaking Compound Words, What Is a Syllable?, Put Syllables Together to Make Words, Break Words into Syllables, The First Sound in a Word, Words with the Same First Sound, Making Words from First Sounds and the Rest

WATERFORD MENTOR

Waterford Mentor is a secure website where families can log in to see their child's usage and learning achievements. Waterford families also receive short messages with ideas on how to engage in their child's learning and have access to hundreds of resources and activities.

Waterford Mentor is available online and in the Mentor app (for iOS and Android).