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CURRICULUM

*Correlation Criteria:* ALABAMA COURSE OF STUDY: MATHEMATICS 2019 & SCIENCE 2015 *for* KINDERGARTEN, 1ST, AND 2ND GRADES

JANUARY 2023

# CURRICULUM *Correlation*


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

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| **MATHEMATICS** | | |
| **KINDERGARTEN** | | |
| **NUMBER SENSE** | | |
| K.NS.1: Count to at least 100 by ones and tens and count on by one from any number. | • Number Songs<br>• Counting Songs<br>• Math Books<br>• Count On<br>• Number Counting<br>• Number Instruction<br>• Skip Counting | • Count to 100 by ones and tens.pdf: Count to 100 by ones and tens.<br>– Missing Numbers<br>– Count On By 1<br>– Numbers 1–5<br>– Numbers 6–10<br>– Math Newsletters<br>– Count By 10s<br>– Numbers 60–69<br>– I Can Count to 100 |
| K.NS.2: Write whole numbers from 0 to 20 and recognize number words from 0 to 10. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). | • Math Books<br>• Counting Songs<br>• Number Songs<br>• Number Counting<br>• Number Instruction | • Writing from 0 to 20.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral.<br>– Numbers Practice<br>– Numbers 1–5<br>– Add groups<br>– Count on by 1<br>– Number Writing Practice |
| K.NS.3: Find the number that is one more than or one less than any whole number up to 20. | • Number Instruction<br>• Count On<br>• Counting Back<br>• Number Line<br>• Number Chart | |

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| **NUMBER SENSE *continued*** | | |
| K.NS.4: Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number name said describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted. | • Counting Songs<br>• Number Songs<br>• Math Books<br>• Number Counting<br>• One-to-one Correspondence<br>• Make and Count Groups<br>• Number Instruction | • 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.<br>– Number Walk<br>• 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.<br>– Mixed Up Counting |
| K.NS.5: Count up to 20 objects arranged in a line, a rectangular array, or a circle. Count up to 10 objects in a scattered configuration. Count out the number of objects, given a number from 1 to 20. | • Counting Songs<br>• Number Songs<br>• Math Books<br>• Make and Count Groups<br>• Number Counting<br>• Number Instruction<br>• 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.<br>– Hoop Addition |
| K.NS.6: Recognize sets of 1 to 10 objects in patterned arrangements and tell how many without counting. | • Moving Target (Dots)<br>• Match Numbers<br>• Make and Count Groups | |
| K.NS.7: 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). | • Song: Greater Than, Less Than<br>• Book: For the Birds<br>• Greater Than, Less Than<br>• More Than, Fewer Than<br>• More Than<br>• Fewer Than | • 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.<br>– Beans and More<br>– More Than Buttons<br>– Short Names, Long Names<br>– Noodle Necklaces<br>– Groups Do Count!<br>– More Than, Fewer Than, Equal<br>– Which Has More? 1<br>– Fewer Than<br>– More or Fewer<br>– Which Has More? 2<br>– Greater or Less |

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| **NUMBER SENSE *continued*** | | |
| K.NS.8: Compare the values of two numbers from 1 to 20 presented as written numerals. | • Book: For the Birds<br>• Greater Than, Less Than<br>• More Than, Fewer Than<br>• More Than<br>• Fewer Than | • Compare two numbers.pdf: Compare two numbers between 1 and 10 presented as written numerals.<br>– More or Less Spinner<br>– Catch Me If You Can!<br>– Greater or Less<br>– Less or Greater<br>– Spinner<br>– Board game<br>– Number cards |
| K.NS.9: Use correctly the words for comparison, including: one and many; none, some and all; more and less; most and least; and equal to, more than and less than. | • Book: For the Birds<br>• Greater Than, Less Than<br>• More Than, Fewer Than<br>• More Than<br>• Fewer Than | • 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.<br>– Beans and More<br>– More Than Buttons<br>– Short Names, Long Names<br>– Noodle Necklaces<br>– Groups Do Count!<br>– More Than, Fewer Than, Equal<br>– Which Has More? 1<br>– Fewer Than<br>– More or Fewer<br>– Which Has More? 2<br>– Greater or Less<br>– More Than/Fewer Than Flashcard Sets |
| K.NS.10: Separate sets of ten or fewer objects into equal groups. | • Song: Fractions<br>• Book: Half For You and Half For Me<br>• Equal-part Fractions | |
| K.NS.11: Develop initial understandings of place value and the base 10 number system by showing equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects and drawings. | • 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.<br>– Place Value |

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| **COMPUTATION AND ALGEBRAIC THINKING** | | |
| K.CA.1: Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10. | • Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction<br>• Book: Five Delicious Muffins<br>• Make and Count Groups<br>• Add Groups<br>• Subtract Groups<br>• Act Out Addition<br>• Act Out Subtraction | |
| K.CA.2: Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem). | • Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction<br>• Book: Five Delicious Muffins<br>• Add Groups<br>• Subtract Groups<br>• Act Out Addition<br>• Act Out Subtraction | • 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.<br>– Additions Stories<br>– Act It Out Stories<br>– Manipulative Stories<br>– Edible Stories<br>– One, Two, Three, Show<br>– Circus Subtraction<br>– Partner Subtraction<br>– Farmer's Market<br>– Green and Speckled Frogs<br>– Cars and Trucks Subtraction<br>– Yummy Subtraction<br>– Act Out Addition<br>– Act Out Subtraction<br>– Addition Newsletter<br>– Subtraction Newsletter<br>– Subtraction Flashcards |

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| **COMPUTATION AND ALGEBRAIC THINKING *continued*** | | |
| K.CA.3: Use objects, drawings, etc., to decompose numbers less than or equal to 10 into pairs in more than one way, and record each decomposition with a drawing or an equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). [In Kindergarten, students should see equations and be encouraged to trace them, however, writing equations is not required.] | • Make and Count Groups<br>• Add Groups<br>• Subtract Groups<br>• Act Out Subtraction | • 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.<br>– Addition Cubes<br>– Fact Families |
| K.CA.4: Find the number that makes 10 when added to the given number for any number from 1 to 9 (e.g., by using objects or drawings), and record the answer with a drawing or an equation. | • Make 10<br>• Missing Addends<br>• Count On<br>• Act Out Addition | • 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.<br>– How Many More? |
| K.CA.5: Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes. | • Song: Train Stations Pattern<br>• Patterns<br>• Pattern AB; ABB; ABC<br>• Number Chart | |
| **GEOMETRY** | | |
| K.G.1: Describe the positions of objects and geometric shapes in space using the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of. | • Songs: Position Cat; Get Over the Bugs<br>• Books: Up in the Air<br>• Position<br>• Over, Under, Above, Below<br>• Above, Below, Next to, On<br>• Inside, Outside, Between<br>• Over, Under, and Through | • 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.<br>– Shapes Scavenger Hunt |
| K.G.2: 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). | • Song: Corners and Sides<br>• Simple Shapes<br>• Solid Shapes<br>• Space Shapes<br>• Congruence<br>• Tangrams<br>• 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).<br>– Comparing Shapes |

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| **GEOMETRY *continued*** | | |
| K.G.3: Model shapes in the world by composing shapes from objects (e.g., sticks and clay balls) and drawing shapes. | • Geoboard<br>• Tangrams | • Model shapes.pdf: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.<br>– Building Shapes |
| K.G.4: Compose simple geometric shapes to form larger shapes (e.g., create a rectangle composed of two triangles). | • Geoboard<br>• Tangrams | • Form larger shapes.pdf: Compose simple shapes to form larger shapes.<br>– Combining Shapes |
| **MEASUREMENT** | | |
| K.M.1: Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more. | • Songs: Savanna Size, Measuring Plants<br>• Capacity<br>• Length<br>• Big and Little<br>• Tall and Short<br>• Heavy and Light<br>• Size<br>• Match | • Comparing objects.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.<br>– Filling Table<br>– Order It Up<br>– Straw Rulers<br>– Measuring Walk<br>– Heavy or Light<br>– Make A Balance<br>– Size Scavenger Hunt<br>– Big and Little Sort<br>– Boxes in a Line<br>– Teddy Bear Line-Up<br>– Magazine Sorting<br>– Tall and Short<br>– Big and Little<br>– Tall and Short<br>– Heavy and Light<br>– Small, Medium, Large<br>– Measuring Length<br>– Measurable Attributes |

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| **MEASUREMENT *continued*** | | |
| K.M.2: Understand concepts of time, including: morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year. Understand that clocks and calendars are tools that measure time. | • Song: Clock Hands<br>• Book: Mr. Romano's Secret, A Time Story<br>• Tell Time<br>• Days of the Week<br>• Months of the Year<br>• Calendar<br>• Today<br>• Yesterday/Tomorrow<br>• Observe a Simple System | |
| **DATA ANALYSIS** | | |
| K.DA.1: Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used. | • Songs: Same and Different; All Sorts of Laundry<br>• Book: Buttons, Buttons<br>• Match<br>• Sort<br>• Order Size<br>• Make and Count Groups<br>• Logic Game | • Classifying objects.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.<br>– Let's Sort<br>– Sort |
| **FIRST GRADE** | | |
| **NUMBER SENSE** | | |
| 1.NS.1: Count to at least 120 by ones, fives, and tens from any given number. In this range, read and write numerals and represent a number of objects with a written numeral. | • Song: Counting On<br>• Books: Painting by Number; Circus 20<br>• Count On<br>• 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.<br>– Mystery Numbers<br>– I Can Write Numbers to 99<br>– Numbers: 20–29; 30-39; 40-49; 50-59; 60-69<br>– Counting to 89<br>– Counting Charts:<br>– I Can Count to 50; 100; 99; 120 |

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| **NUMBER SENSE *continued*** | | |
| 1.NS.2: Understand that 10 can be thought of as a group of ten ones — called a "ten." Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. Understand that 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). | • Song: Place Value<br>• Place Value of 2-digit Numbers<br>• Add with Manipulatives | • Tens as a bundle of ones.pdf: 10 can be thought of as a bundle of ten ones—called a "ten."<br>– Popsicles to Ten<br>• 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).<br>– Toss It |
| 1.NS.3: Match the ordinal numbers first, second, third, etc., with an ordered set up to 10 items. | • Song: Ordinals<br>• Book: The Circus Came to Town<br>• Ordinal Numbers | |
| 1.NS.4: Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. | • Place Value<br>• Greater Than, Less Than (2-digit Numbers) | • 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 <.<br>– More or Less Spinner<br>– Catch Me if You Can!<br>– What Are You Looking For?<br>– Two-Pile Sort |
| 1.NS.5: Find mentally 10 more or 10 less than a given two-digit the number without having to count, and explain the thinking process used to get the answer. | • Song: Skip Counting<br>• Book: Navajo Beads<br>• Add Tens<br>• Subtract Tens<br>• Skip Count by 10<br>• 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.<br>– Ten-O<br>– Toss It<br>– Make a Number<br>– Subtract 10<br>– Flashcards<br>– Bingo<br>– Addition of Tens |
| 1.NS.6: Show equivalent forms of whole numbers as groups of tens and ones, and understand that the individual digits of a two-digit number represent amounts of tens and ones. | • Song: Place Value<br>• Place Value of 2-digit Numbers | |

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| **COMPUTATION AND ALGEBRAIC THINKING** | | |
| 1.CA.1: Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. 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). Understand the role of 0 in addition and subtraction. | • Song: Fact Families<br>• Book: Facts about Families<br>• Addition<br>• Subtraction<br>• Addition Sentences<br>• Subtraction Sentences<br>• Addition and Subtraction Relationship<br>• Addition and Subtraction Fact Families<br>• Missing Addends<br>• Missing Minuends and Subtrahends<br>• Subtraction Patterns | • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.<br>– The Three Little Bears<br>– Fact Family Bingo<br>– A Graph of Fact Families<br>– Bean Facts<br>– Draw a Picture<br>– Addition<br>– Number Pyramid<br>– Subtraction Sentences<br>– Model the Story<br>– Fact Families<br>– Add _ and 1–5; _ and 6–10<br>– Order Property of Addition<br>– Add Doubles +1 to 11<br>– Add Doubles to 20<br>– Add Doubles +1 to 21)<br>– Make 10<br>– Subtract _ from<br>– Subtract<br>– Subtraction Patterns<br>– Fact Families to 10; to 20<br>– Add and Subtract Doubles to 10; Doubles to 20 |
| 1.CA.2: Solve real-world problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem). | • Songs: Fact Families; Doubles<br>• Book: Facts About Families<br>• Addition and Subtraction Fact Families<br>• Addition and Subtraction Relationship | • 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.<br>– Guess and Check<br>– Model the Story |

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| **COMPUTATION AND ALGEBRAIC THINKING *continued*** | | |
| 1.CA.3: Create a real-world problem to represent a given equation involving addition and subtraction within 20. | • Songs: Fact Families; Doubles<br>• Book: Facts About Families<br>• Addition and Subtraction Fact Families<br>• Addition and Subtraction Relationship | • 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.<br>– Guess and Check<br>– Model the Story |
| 1.CA.4: Solve real-world problems that call for addition of three whole numbers whose sum is within 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem). | • Addition<br>• Addition Patterns<br>• Missing Addends | • 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.<br>– Draw a Picture |
| 1.CA.5: 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 models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and that sometimes it is necessary to compose a ten. | • Addition<br>• Add Tens<br>• Doubles<br>• Doubles Plus 1<br>• Add with Manipulatives<br>• Add Vertical Squares<br>• Addition and Subtraction Relationship<br>• Add with Regrouping Concept<br>• Add 2-digit and 1-digit Numbers with Regrouping<br>• Add 2-digit Numbers without Regrouping<br>• Add 2-digit Numbers with Regrouping | • 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)<br>– Drawing Tens<br>– Beans, Beans, and More Beans<br>– The Kingdom of Popsicle Stick-Filled Purses<br>– Straws and Macaroni<br>– Bean Addition<br>– Adding Tens and Ones<br>– Color Adds Up<br>– Cookies and Milk!<br>– Addition of Two-Digit Numbers |
| 1.CA.6: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2). | • Addition Sentences<br>• Subtraction Sentences<br>• Greater Than, Less Than<br>• More Than, Fewer Than<br>• Addition and Subtraction Relationship | • Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.<br>– Show Me!<br>– Tricky Total<br>– Domino Addition<br>– Domino Subtraction<br>– Playground Fact Snake |

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| **COMPUTATION AND ALGEBRAIC THINKING *continued*** | | |
| 1.CA.7: Create, extend, and give an appropriate rule for number patterns using addition within 100. | • Song: Fact Families<br>• Book: Facts about Families<br>• Addition<br>• Addition Sentences<br>• Addition and Subtraction Relationship<br>• Addition and Subtraction Fact Families<br>• Addition Patterns | • 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).<br>– Drawing Tens<br>– Beans, Beans, and More Beans<br>– The Kingdom of Popsicle Stick-Filled Purses<br>– Straws and Macaroni<br>– Bean Addition<br>– Newsletter<br>– Adding Tens and Ones<br>– Color Adds Up<br>– Cookies and Milk!<br>– Addition of Two-Digit Numbers<br>– Addition and Subtraction of Large Numbers |
| **GEOMETRY** | | |
| 1.G.1: Identify objects as two-dimensional or three- dimensional. Classify and sort two-dimensional and three-dimensional objects by shape, size, roundness and other attributes. Describe how two-dimensional shapes make up the faces of three-dimensional objects. | • Songs: Corners and Sides; Kites<br>• Space Shapes<br>• Simple Shapes<br>• Sort | |
| 1.G.2: Distinguish between defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Create and draw two- dimensional shapes with defining attributes. | • Song: Corners and Sides<br>• Space Shapes<br>• Simple Shapes<br>• World Shapes<br>• Geoboard | • Attributes.pdf: Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes.<br>– Sorting Shapes |

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| **GEOMETRY *continued*** | | |
| 1.G.3: Use 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. [In grade 1, students do not need to learn formal names such as "right rectangular prism."] | • Space Shapes<br>• Simple Shapes<br>• World Shapes<br>• Geoboard<br>• Tangrams | |
| 1.G.4: Partition circles and rectangles into two and four equal parts; describe the parts 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 parts. Understand for partitioning circles and rectangles into two and four equal parts that decomposing into equal parts creates smaller parts. | • Song: Fractions<br>• Books: Halves and Fourths and Thirds; Half For You and Half For Me<br>• Equal-part Fractions<br>• 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.<br>– Make It Equal<br>– Fraction Friends<br>– Fraction Train<br>– Halves, Thirds, Fourths<br>– Equal Parts |

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| **MEASUREMENT** | | |
| 1.M.1: Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature. | • Song: Measuring Plants<br>• Length<br>• Capacity<br>• Nonstandard Units of Length | • Comparing objects.pdf: 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.<br>– Filling Table<br>– Order It Up<br>– Straw Rulers<br>– Measuring Walk<br>– Heavy or Light<br>– Make A Balance<br>– Size Scavenger Hunt<br>– Big and Little Sort<br>– Boxes in a Line<br>– Teddy Bear Line-Up<br>– Magazine Sorting<br>– Tall and Short |
| 1.M.2: Tell and write time to the nearest half-hour and relate time to events (before/after, shorter/longer) using analog clocks. Understand how to read hours and minutes using digital clocks. | • Song: Clock Hands<br>• Books: Mr. Romano's Secret: A Time Story<br>• Tell Time to the Hour<br>• Tell Time to the Half-Hour | • Hours and Half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks.<br>– What Comes After, Before, Or Between?<br>– Make Your Own Clock<br>– Learning to Tell Time<br>– Matching Time<br>– What Numbers are Missing?<br>– What Time Is It?<br>– Time of Day<br>– Clock flashcards |
| 1.M.3: Identify the value of a penny, nickel, dime and a collection of pennies, nickels, and dimes. | • Songs: Money; Save Your Pennies<br>• Coin Identification<br>• Coin Value<br>• Count Dimes, Nickels, and Pennies<br>• Count Nickels and Pennies or Dimes and Pennies<br>• Count Coins<br>• Equivalent Sums of Money | |

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| **DATA ANALYSIS** | | |
| 1.DA.1: Organize and interpret data with up to three choices (What is your favorite fruit? apples, bananas, oranges); ask and answer questions about the total number of data points, how many in each choice, and how many more or less in one choice compared to another. | • Songs: Tallying; Graphing<br>• Books: One More Cat; Painting by Number<br>• Tally Marks<br>• Graphs<br>• 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.<br>– Ice Cream Sundae<br>– Make a Real Object Graph<br>– Make a Weather Bar Graph<br>– Weather Flashcards<br>– Our Favorite Foods<br>– Make a Graph<br>– Make a Table<br>– How Many?<br>– Bugs!<br>– Use Graphs and Tables<br>– How Big Is Your Family? |
| **SECOND GRADE** | | |
| **NUMBER SENSE** | | |
| 2.NS.1: Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number. | • Song: Skip Counting<br>• Skip Count<br>• Skip Count by 10<br>• Skip Count by 5<br>• Number Sequences and Patterns | • Counting within 1000.pdf: Count within 1,000; skip-count by 5s, 10s, and 100s.<br>– Chart Patterns<br>– My 199; 200; 299; 300; 399; 400; 499; 500; 599; 600; 699; and 700 Picture<br>– 900 Chart |
| 2. NS.2: Read and write whole numbers up to 1,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000. | • Sequences of 2-digit Numbers<br>• Sequences of 3-digit Numbers<br>• Number Chart<br>• Place Value<br>• Number Recognition and Sense | • Read and write numbers to 1000.pdf: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.<br>– Cube Trails<br>– Race for a Flat<br>– High/Low Number Cube Throw<br>– Lucky Five |
| 2. NS.3: Plot and compare whole numbers up to 1,000 on a number line. | • Number Line | |

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| **NUMBER SENSE *continied*** | | |
| 2. NS.4: Match the ordinal numbers first, second, third, etc., with an ordered set up to 30 items. | • Song: Ordinals<br>• Book: The Circus Came to Town<br>• Ordinal Numbers | |
| 2. NS.5; Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by placing that number of objects in two groups of the same size and recognizing that for even numbers no object will be left over and for odd numbers one object will be left over, or by pairing objects or counting them by 2s). | • Song: Odd Todd and Even Steven<br>• Skip Count by 2<br>• Addition Facts | • Odd and even recognition.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members<br>– Missing Patterns<br>– Counting by 2s<br>– What's My Number? |
| 2. NS.6: 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 that 100 can be thought of as a group of ten tens — called a "hundred." Understand that 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). | • Song: Place Value<br>• Place Value<br>• 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."<br>– The Kingdom of Popsicle Stick-Filled Purses<br>– Grouping hundreds.pdf: 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)<br>– My Three-Digit Numbers |
| 2.NS.7: Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. | • Greater Than, Less Than (3-digit Numbers)<br>• Place Value<br>• 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.<br>– More or Less<br>– The Hands Have It!<br>– Larger or Smaller?<br>– Comparing Number Cards<br>– Number Cards<br>– <,>, = Cards<br>– Greater Than, Less Than, Equal To |

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| **COMPUTATION AND ALGEBRAIC THINKING** | | |
| 2.CA.1: Add and subtract fluently within 100. | • Songs: Fact Families; Doubles<br>• Subtraction Patterns<br>• Addition Facts to 20 | • 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.<br>– Sets of flashcards:<br>– Addition—horizontal; vertical<br>– Subtraction—horizontal; vertical<br>– Addition and subtraction—horizontal and vertical |
| 2.CA.2: Solve real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). Use estimation to decide whether answers are reasonable in addition problems. | • Addition<br>• Subtraction<br>• Missing Addends and Subtrahends<br>• Subtraction Sentences<br>• 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.<br>– Animal Math<br>– Picture Problems<br>– Act it Out<br>– Guess and Check |
| 2.CA.3: Solve real-world problems involving addition and subtraction within 100 in situations 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). | • Book: Yangshi's Perimeter<br>• Addition<br>• Subtraction<br>• Length<br>• Standard Units of Length | • One- and two-step word problems 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.<br>– Animal Math<br>– Picture Problems<br>– Color the Chart<br>– Think About it Differently |

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| **COMPUTATION AND ALGEBRAIC THINKING *continued*** | | |
| 2.CA.4: Add and subtract within 1000, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and that sometimes it is necessary to compose or decompose tens or hundreds | • Place Value<br>• Addition and Subtraction Relationship<br>• Commutative Properties of Addition<br>• Addition<br>• Subtraction<br>• Add without Regrouping<br>• Add with Regrouping<br>• Subtract without regrouping<br>• Subtract with Regrouping<br>• Act Out Addition<br>• 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.<br>– Choose and Add<br>– Mix and Match Addition<br>– Expanded Subtraction<br>– Subtracting Repeats<br>– 999<br>– Prediction<br>– Up and Away<br>– Regrouping Treasure Hunt<br>– Play Ball<br>– Squirrel Facts |
| 2.CA.5: 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 groups. | • Addition<br>• Multiply Using Repeated Addition<br>• Multiply Using Arrays | |
| 2.CA.6: Show that the order in which two numbers are added (commutative property) and how the numbers are grouped in addition (associative property) will not change the sum. These properties can be used to show that numbers can be added in any order. | • Addition<br>• Place Value<br>• Number Line<br>• Commutative Properties of Addition<br>• Act Out Addition | • Explaining addition and subtraction strategies.pdf: Explain why addition and subtraction strategies work, using place value and the properties of operations.<br>– Cube Trails<br>– Race for a Flat<br>– High/Low Number Cube Throw<br>– Lucky Five<br>– Hundreds, Tens, Ones Chart<br>– Numbers Cards |

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| **COMPUTATION AND ALGEBRAIC THINKING *continued*** | | |
| 2.CA.7: Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1000. | • Number Patterns<br>• Number Sequences and Patterns<br>• Number Patterns of 2-digit Numbers<br>• Number Patterns of 3-digit Numbers<br>• Subtraction Patterns | |
| **GEOMETRY** | | |
| 2.G.1: Identify, describe, and classify two- and three- dimensional shapes (triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes. | • Songs: Shapes, Shapes, Shapes; Corners and Sides; Kites<br>• Book: The Shape of Things<br>• Simple Shapes<br>• Space Shapes<br>• World Shapes<br>• Geoboard | |
| 2.G.2: Create squares, rectangles, triangles, cubes, and right rectangular prisms using appropriate materials. | • Geoboard | • 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.<br>– Making Shapes<br>– Shapes Review |
| 2.G.3: Investigate and predict the result of composing and decomposing two- and three-dimensional shapes. | • Geoboard<br>• Tangrams | • Form larger shapes.pdf: Compose simple shapes to form larger shapes.<br>– Combining Shapes |
| 2.G.4: Partition a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares. | • Song: Fractions<br>• Books: Halves and Fourths and Thirds; The Fraction Twins<br>• Fractions<br>• Label Parts of Fractions<br>• Fractions of Regions<br>• Fractions of Groups | |

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| **MEASUREMENT** | | |
| 2.M.1: Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter. | • Measurement Tools | • Measurement tools.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.<br>– Ready, Set, Measure<br>– Treasure Hunt<br>– Centimeter ruler<br>– Inch Ruler<br>– Let's Measure in Centimeters!<br>– Let's Measure in Inches! |
| 2.M.2: Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter and meter. | • Song: Measuring Plants<br>• Book: Birds at My House<br>• Length<br>• Measurement Tools<br>• Standard Units of Length | • Estimating lengths.pdf: Estimate lengths using units of inches, feet, centimeters, and meters.<br>– Ready, Set, Measure<br>– Treasure Hunt<br>– Let's Measure in Centimeters!<br>– Let's Measure in Inches!<br>– Measuring Perimeter<br>• Measurement tools.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.<br>– Ready, Set, Measure<br>– Treasure Hunt<br>– Centimeter ruler<br>– Inch Ruler<br>– Let's Measure in Centimeters!<br>– Let's Measure in Inches! |
| 2.M.3: Understand that the length of an object does not change regardless of the units used. 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. | • Length<br>• Standard Units of Length<br>• 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.<br>– Ready, Set, Measure |
| 2.M.4: Estimate and measure volume (capacity) using cups and pints. | • Book: Birds At My House<br>• Capacity | |

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| MEASUREMENT *continued* | | |
| 2.M.5: Tell and write time to the nearest five minutes from analog clocks, using a.m. and p.m. Solve real-world problems involving addition and subtraction of time intervals on the hour or half hour. | • Songs: Telling Time; Clock Hands<br>• Tell Time<br>• Tell Time to Five Minutes<br>• Tell Time to the Quarter Hour<br>• Tell Time to the Minute | • 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.<br>– Matching Clocks<br>– Cartoon Captions<br>– Time to 5 Minutes |
| 2.M.6: Describe relationships of time, including: seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year. | • Book: How Long Is a Minute?<br>• Tell Time<br>• Days of the Week<br>• Months of the Year<br>• Calendar<br>• Today<br>• Yesterday/Tomorrow | |
| 2.M.7: Find the value of a collection of pennies, nickels, dimes, quarters and dollars. | • Songs: Money; Save Your Pennies<br>• Coin Identification<br>• Coin Value<br>• Quarters<br>• Count Dimes, Nickels, and Pennies<br>• Count Quarters, Dimes, Nickels, and Pennies<br>• Count Nickels and Pennies or Dimes and Pennies<br>• Count Coins<br>• Count Bills and Coins<br>• Equivalent Sums of Money | • Money Word Problems.pdf: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.<br>– Supermarket Hunt<br>– Shopping for My Family<br>– Money Combinations<br>– Money Sums<br>– Pizza Parlor<br>– How Much Back?<br>– Coin Count<br>– Bills and Coins<br>– Let's Count Coins<br>– Money Addition<br>– Change is Good!<br>– Make 45¢ |

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| **DATA ANALYSIS** | | |
| 2.DA.1: Draw a picture graph (with single-unit scale) and a bar graph (with single-unit scale) to represent a data set with up to four choices (What is your favorite color? red, blue, yellow, green). Solve simple put-together, take- apart, and compare problems using information presented in the graphs. | • Songs: Tallying; Graphing<br>• Books: One More Cat; Painting by Number<br>• Tally Marks<br>• Graphs<br>• Make a Table | • 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.<br>– Questions and Answers<br>– Library Book Survey<br>– Playground Survey<br>– Rock Collections<br>– Use Graphs and Tables<br>– How Big Is Your Family? |
| **SCIENCE** | | |
| **KINDERGARTEN** | | |
| **K-PS2: Motion and Stability: Forces and Interactions** | | |
| K-PS2-1. 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. | • Song: Push and Pull<br>• Book: Mr. Mario's Neighborhood<br>• Push and Pull | • Learning Together: How It Works |
| K-PS2-2 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. | • Song: Push and Pull<br>• Push and Pull | |
| **K-PS3 Energy** | | |
| K-PS3-1: Make observations to determine the effect of sunlight on Earth's surface. | • Songs: Water; Plants Are Growing; Sun Blues<br>• Sun<br>• Water<br>• Rocks | |
| K-PS3-2. Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on an area. | Waterford encourages everyone to have writing, drawing, and art materials available for children's creations. | |

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| **K-LS1 From Molecules to Organisms: Structures and Processes** | | |
| K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. | • Songs: Water; Food From Plants<br>• Books: Mela's Water Pot; Everybody Needs to Eat<br>• Sun<br>• Plants<br>• Water<br>• Plants and Animals Need Air<br>• Healthy Plants' Needs | • More to Explore Experiment: Water for Plants<br>• Learning Together: Green and Growing |
| **K-ESS2 Earth's Systems** | | |
| K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. | • Song: Seasons<br>• Book: That's What I Like: A Book About Seasons<br>• Weather<br>• Calendar/Graph Weather<br>• Weather Patterns<br>• Clouds<br>• Spring<br>• Summer<br>• Fall<br>• Winter | • Learning Together: Weather; The Weather Around Us<br>• Weather Cards |
| K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. | • Books: Winter Snoozers; Birds at my House; The Old Maple Tree; Turtle's Pond | |
| **K-ESS3 Earth and Human Activity** | | |
| K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. | • Song: Four Ecosystems<br>• Book: Where in the World Would You Go Today?<br>• Oceans<br>• Mountains<br>• Deserts<br>• Rainforests | • Learning Together: Our Earth |
| K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. | • Songs: Precipitation; Storms<br>• Book: Whatever the Weather<br>• Weather Tools<br>• Calendar/Graph Weather | |

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| **K-ESS3 Earth and Human Activity *continued*** | | |
| K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. | • Songs: Conservation; Pollution Rap<br>• Pollution and Recycling<br>• Care of Water<br>• Care of Earth | • More to Explore Experiment: Recycling<br>• Learning Together: Our Earth |
| **K-2-ETS1 Engineering Design** | | |
| K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. | • Song: Inventing<br>• Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright<br>• Inventions | • More to Explore Experiment: Recycling; Simple Machines |
| K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. | • Books: How Did the Chicken Cross the Road?; Inventions All Around<br>• Simple Machines | |
| K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. | • Book: Warm Soup for Dedushka<br>• Heat Movement<br>• Movement of Heat<br>• Heat Experiment | • More to Explore Experiment: Evaporation |
| **FIRST GRADE** | | |
| **1-PS4 Waves and Their Applications in Technologies for Information Transfer** | | |
| 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. | • Song: Sound<br>• Book: What Sounds Say<br>• Sound Waves | • More to Explore Experiment: Sound |
| 1-PS4-2. Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated. | • Books: My Family Campout; Lightning Bugs<br>• Light Properties<br>• Properties of Light | |

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| **1-PS4 Waves and Their Applications in Technologies for Information Transfer *continued*** | | |
| 1-PS4-3. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light. | • Book: My Family Campout<br>• Light Properties<br>• Properties of Light | |
| 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. | • Song: Inventing<br>• Books: I Want to Be a Scientist Like Thomas Edison; Inventions All Around | |
| **1-LS1 From Molecules to Organisms: Structures and Processes** | | |
| 1-LS1-1. 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. | • Books: I Wish I Had Ears Like a Bat; Animal Bodies; Fawn Eyes<br>• Deserts | |
| 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. | • Song: Animal Bodies<br>• Animal Behavior<br>• Animal Bodies | |
| **1-LS3 Heredity: Inheritance and Variation of Traits** | | |
| 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. | • Books: George and Jack; A Seed Grows<br>• Build Knowledge: Mine | • More to Explore Experiment: Traits |
| **1-ESS1 Earth's Place in the Universe** | | |
| 1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. | • Songs: The Moon; Sun Blues<br>• Books: Moon Song; Star Pictures; My Family Campout<br>• Sun<br>• Moon<br>• Constellations | • More to Explore Experiment: The Moon<br>• Learning Together: The Sky Above Us |
| 1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. | • Sun<br>• Spring<br>• Summer<br>• Fall<br>• Winter | |

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| **K-2-ETS1 Engineering Design** | | |
| K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. | • Song: Inventing<br>• Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright<br>• Inventions | • More to Explore Experiment: Recycling; Simple Machines |
| K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. | • Books: How Did the Chicken Cross the Road?; Inventions All Around<br>• Simple Machines | |
| K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. | • Book: Warm Soup for Dedushka<br>• Heat Movement<br>• Movement of Heat<br>• Heat Experiment | • More to Explore Experiment: Evaporation |
| **SECOND GRADE** | | |
| **2-PS1 Matter and Its Interactions** | | |
| 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. | • Book: Warm Soup for Dedushka<br>• Changes in Matter<br>• Movement of Heat<br>• States of Water<br>• Materials | |
| 2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. | • Book: Warm Soup for Dedushka<br>• Heat Movement<br>• Movement of Heat<br>• Heat Experiment | |
| 2-PS1-3. 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. | • Book: I Want to Be a Scientist Like Wilbur and Orville Wright<br>• Geoboard<br>• Tangrams | |

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| **2-PS1 Matter and Its Interactions *continued*** | | |
| 2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. | • Books: Warm Soup for Dedushka; Pancakes Matter<br>• Changes in Matter<br>• Movement of Heat | |
| **2-LS2 Ecosystems: Interactions, Energy, and Dynamics** | | |
| 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow. | • Song: Plants Are Growing<br>• Sun<br>• Water<br>• Plant Experiment<br>• Healthy Plants' Needs | • More to Explore Experiment: Light for Plants |
| 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. | • Books: The Bee's Secret; The Old Maple Tree | |
| **2-LS4 Biological Evolution: Unity and Diversity** | | |
| 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats. | • Songs: Animal Bodies; Four Ecosystems<br>• Books: Animal Bodies; Where in the World Would You Go Today?<br>• Ecosystems<br>• Animal Bodies<br>• Animal Behavior | • Learning Together: Places on Earth |
| **2-ESS1 Earth's Place in the Universe** | | |
| 2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly. | • Songs: The Four Seasons; Rock Cycle<br>• Books: That's What I Like: A Book About Seasons; Whatever the Weather; Fossils Under Our Feet<br>• Rock Cycle<br>• Fossils<br>• Spring<br>• Summer<br>• Fall<br>• Winter<br>• Water | • More to Explore Experiment: Rocks |

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| **2-ESS2 Earth's Systems** | | |
| 2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. | Waterford encourages everyone to have writing, drawing, and art materials available for children's creations. | |
| 2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. | • Songs: Water; Precipitation; Water Is All Around<br>• Water Sources<br>• Water<br>• Water Cycle<br>• Care of Water<br>• Oceans | |
| 2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid. | • Songs: Water; Uses of Water; Precipitation; Water Is All Around<br>• Water Sources<br>• Water<br>• Water Cycle<br>• Care of Water<br>• States of Water<br>• Heat Changes Water | |
| **K-2-ETS1 Engineering Design** | | |
| K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. | • Song: Inventing<br>• Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright<br>• Inventions | • More to Explore Experiment: Recycling; Simple Machines |
| K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. | • Books: How Did the Chicken Cross the Road?; Inventions All Around<br>• Simple Machines | |
| K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. | • Book: Warm Soup for Dedushka<br>• Heat Movement<br>• Movement of Heat<br>• Heat Experiment | • More to Explore Experiment: Evaporation |

## 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



## 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)

### 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.*

### READING HOMELINK NEWSLETTERS

#### Alphabet Knowledge

#### Comprehension and Vocabulary

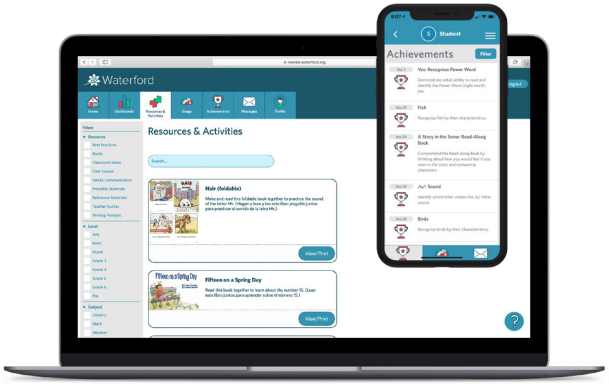
Sum Up: Remember Order, Sum Up: Remember Details, Peek at the Story, Guess and Check, Connect to Me, Build Knowledge

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