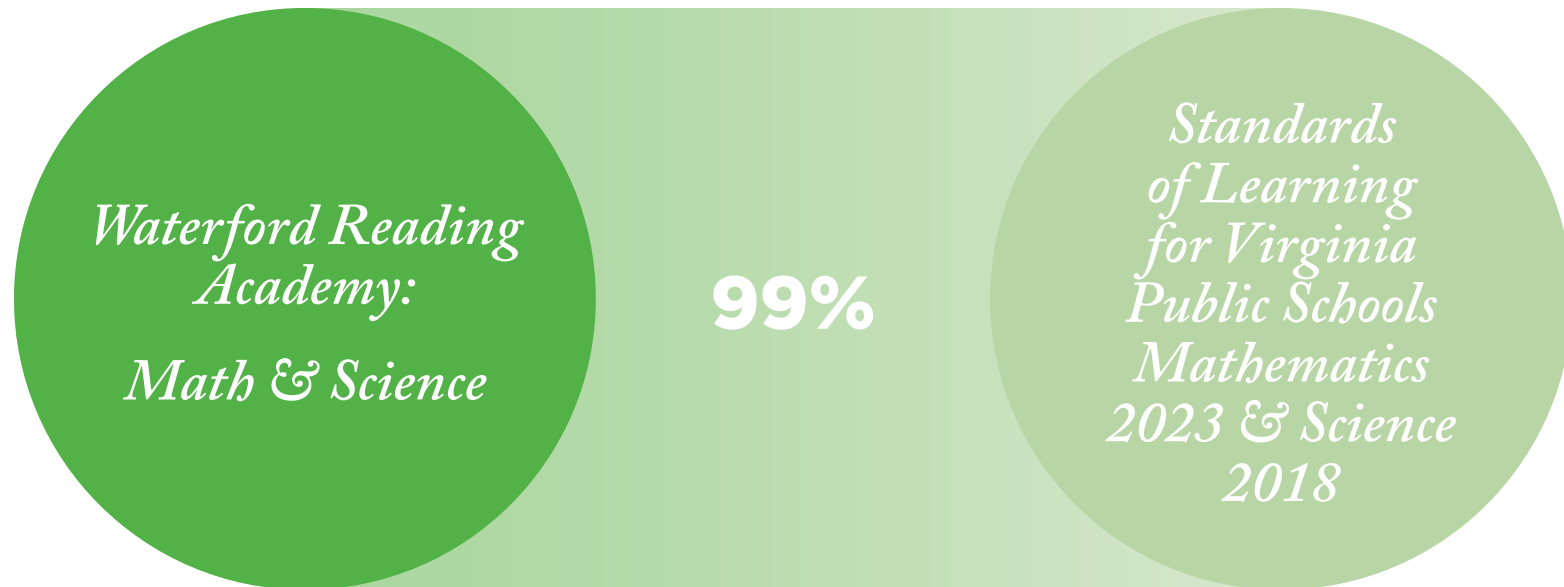


CURRICULUM *Correlation*



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

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STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MATHEMATICS		
KINDERGARTEN		
Number and Number Sense		
<p>K.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 100.</p> <p>a) Use one-to-one correspondence to determine how many are in a given set containing 30 or fewer concrete objects (e.g., cubes, pennies, balls), and describe the last number named as the total number of objects counted.</p>	<ul style="list-style-type: none"> • Make and Count Groups • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames • One-to-One Correspondence 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Number Walk • 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. <ul style="list-style-type: none"> - Mixed Up Counting
<p>b) Recognize and explain that the number of objects remains the same regardless of the arrangement or the order in which the objects are counted.</p>	<ul style="list-style-type: none"> • Make and Count Groups • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames • One-to-One Correspondence 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Mixed Up Counting
<p>c) Represent forward counting by ones using a variety of tools, including five-frames, ten frames, and number paths (a prelude to number lines)</p>	<ul style="list-style-type: none"> • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames 	
<p>d) Count forward orally by ones from 0 to 100.</p>	<ul style="list-style-type: none"> • Number Songs • Counting Songs (See titles at end of document.) • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames 	<ul style="list-style-type: none"> • Count to 100 by ones and tens.pdf: Count to 100 by ones and tens. <ul style="list-style-type: none"> - Missing Numbers - Count On By 1 - Numbers 1-5 - Numbers 6-10 - I Can Count to 100

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
e) Count forward orally by ones, within 100, starting at any given number.	<ul style="list-style-type: none"> Song: Counting On Count On 	<ul style="list-style-type: none"> Count forward.pdf: Count forward beginning with a given number within the known sequence. <ul style="list-style-type: none"> Let's Count On Toss and Count Count On by 1
f) Count backward orally by ones when given any number between 1 and 20.	<ul style="list-style-type: none"> Song: Counting Backward Book: A Space Adventure Counting Back Count Down 	
g) State the number after, without counting, when given any number between 0 and 30.	<ul style="list-style-type: none"> Counting Songs (See titles at end of document.) Order Numbers Finger Counting Object Counting Count with 5-Frames Number Chart 	
h) State the number before, without counting, when given any number between 1 and 20.	<ul style="list-style-type: none"> Counting Songs (See titles at end of document.) Order Numbers Finger Counting Object Counting Count with 5-Frames Number Chart 	
i) Use objects, drawings, words, or numbers to compose and decompose numbers 11-19 into a ten and some ones.	<ul style="list-style-type: none"> Place Value Object Counting 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Place Value 11-19

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
j) Group a collection of up to 100 objects (e.g., counters, pennies, cubes) into sets of ten and count by tens to determine the total (e.g., there are 3 groups of ten and 6 leftovers, 36 total objects).	<ul style="list-style-type: none"> Song: Skip Counting Skip Count Make and Count Groups Place Value 	
K.NS.2 The student will identify, represent, and compare quantities up to 30. a) Read, write, and identify the numerals 0 through 30.	<ul style="list-style-type: none"> Song: Count to 31 Number _ Counting (e.g., Number 2 Counting) Finger Counting Object Counting Count with 5-Frames Number Tracing 	<ul style="list-style-type: none"> Write numbers 0-20.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral. <ul style="list-style-type: none"> Numbers Practice Numbers Add groups Count on by 1 Number Writing Practice
b) Construct a set of objects that corresponds to a given numeral within 30, including an empty set.	<ul style="list-style-type: none"> Song: Zero Is a Big Round Hole Make and Count Groups Finger Counting Object Counting Count with 5-Frames One-to-One Correspondence 	
c) Determine and write the numeral that corresponds to the total number of objects in a given set of 30 or fewer concrete objects or pictorial models.	<ul style="list-style-type: none"> Song: Count to 31 Make and Count Groups Finger Counting Object Counting Count with 5-Frames Number Tracing One-to-One Correspondence 	<ul style="list-style-type: none"> Write numbers 0-20.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral. <ul style="list-style-type: none"> Numbers Practice Numbers Add groups Count on by 1 Number Writing Practice
d) Given a set of up to 30 objects, construct another set which has more, fewer, or the same number of objects using concrete or pictorial models.	<ul style="list-style-type: none"> Song: Greater Than, Less Than Book: For the Birds Greater Than, Less Than More Than, Fewer Than More Than Fewer Than Make and Count Groups 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Beans and More More Than Buttons Short Names, Long Names Noodle Necklaces Groups Do Count! More Than, Fewer Than, Equal Which Has More? Fewer Than

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
e) Given a numeral up to 30, construct a set which has more, fewer, or the same number of objects using concrete or pictorial models.	<ul style="list-style-type: none"> Song: Greater Than, Less Than Book: For the Birds Greater Than, Less Than More Than, Fewer Than More Than Fewer Than Make and Count Groups 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Beans and More More Than Buttons Short Names, Long Names Noodle Necklaces Groups Do Count! More Than, Fewer Than, Equal Which Has More? Fewer Than
f) Compare two sets containing up to 30 concrete objects or pictorial models, using the terms more, fewer, or the same as (equal to).	<ul style="list-style-type: none"> Song: Greater Than, Less Than Book: For the Birds Greater Than, Less Than More Than, Fewer Than More Than Fewer Than Make and Count Groups 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Beans and More More Than Buttons Short Names, Long Names Noodle Necklaces Groups Do Count! More Than, Fewer Than, Equal Which Has More? Fewer Than
g) Compare numbers up to 30, to the benchmarks of 5 and to the benchmark of 10 using various models (e.g., five frames, ten frames, number paths [a prelude to number lines], beaded racks, hands) using the terms greater than, less than, or the same as (equal to).	<ul style="list-style-type: none"> Song: Greater Than, Less Than Book: For the Birds Greater Than, Less Than More Than, Fewer Than More Than Fewer Than Make and Count Groups 	<ul style="list-style-type: none"> Compare two numbers.pdf: Compare two numbers between 1 and 10 presented as written numerals. <ul style="list-style-type: none"> More or Less Catch Me If You Can! Greater or Less Less or Greater

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation		
K.CE.1 The student will model and solve single-step contextual problems using addition and subtraction with whole numbers within 10. a) Use objects, drawings, words, or numbers to compose and decompose numbers less than or equal to 5 in multiple ways.	<ul style="list-style-type: none"> • Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • How Many Ways?.pdf: Record all the different ways you can make five using two numbers or amounts. <ul style="list-style-type: none"> - How many ways can we make 5? - How many ways can we make 10?
b) Recognize and describe with fluency part-part-whole relationships for numbers up to 5 in a variety of configurations.	<ul style="list-style-type: none"> • Make and Count Groups 	<ul style="list-style-type: none"> • How Many Ways?.pdf: Record all the different ways you can make five using two numbers or amounts. <ul style="list-style-type: none"> - How many ways can we make 5? - How many ways can we make 10?
c) Model and identify the number that makes 5 when added to a given number less than or equal to 5.	<ul style="list-style-type: none"> • Make and Count Groups • Add Groups • Act Out Addition 	<ul style="list-style-type: none"> • How Many Ways?.pdf: Record all the different ways you can make five using two numbers or amounts. <ul style="list-style-type: none"> - How many ways can we make 5? - How many ways can we make 10?
d) Use objects, drawings, words, or numbers to compose and decompose numbers less than or equal to 10 in multiple ways.	<ul style="list-style-type: none"> • Make 10 • Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Addition Cubes - Fact Families
e) Model and identify the number that makes 10 when added to a given number less than or equal to 10.	<ul style="list-style-type: none"> • Make 10 • Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - How Many More?

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
f) Model and solve single-step contextual problems (join, separate, and part-part-whole) using 10 or fewer concrete objects.	<ul style="list-style-type: none"> Songs: Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction Book: Five Delicious Muffins Add Groups Subtract Groups Act Out Addition Act Out Subtraction 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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
Measurement and Geometry		
K.MG.1 The student will reason mathematically by making direct comparisons between two objects or events using the attributes of length, height, weight, volume, and time. a) Use direct comparisons to compare, describe, and justify the: i) lengths of two objects using the terms longer or shorter;	<ul style="list-style-type: none"> Song: Measuring Plants Length 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Straw Rulers Measuring Walk Teddy Bear Line-Up Tall and Short
ii) heights of two objects using the terms taller or shorter;	<ul style="list-style-type: none"> Big and Little Tall and Short 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Order It Up Straw Rulers Measuring Walk Big and Little Sort Teddy Bear Line-Up Tall and Short

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
iii) weights of two objects using the terms heavier or lighter;	<ul style="list-style-type: none"> • Big and Little • Heavy and Light 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Heavy or Light - Make A Balance - Size Scavenger Hunt - Tall and Short
iv) volumes of two containers using the terms more or less; and	<ul style="list-style-type: none"> • Capacity 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Filling Table
v) amount of time spent on two events using the terms longer or shorter.	<ul style="list-style-type: none"> • Book: How Long Is a Minute? • Compare Minutes to Hours 	
K.MG.2 The student will identify, describe, name, compare, and construct plane figures (circles, triangles, squares, and rectangles). a) Identify and name concrete and pictorial representations of circles, triangles, squares, and rectangles regardless of their orientation in space.	<ul style="list-style-type: none"> • Songs: Marmot Shapes; Corners and Sides • Books: The Shape of Things; Imagination Shapes • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Simple Shapes • Solid Shapes • World Shapes 	<ul style="list-style-type: none"> • Shape recognition.pdf: Correctly name shapes regardless of their orientations or overall size. <ul style="list-style-type: none"> - Shapes Scavenger Hunt - Shapes and Positioning
b) Describe triangles, squares, and rectangles to include the number of sides and number of vertices.	<ul style="list-style-type: none"> • Songs: Marmot Shapes; Kites; Shapes, Shapes, Shapes • Books: The Shape of Things; Imagination Shapes • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Simple Shapes • Solid Shapes • World Shapes 	<ul style="list-style-type: none"> • 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). <ul style="list-style-type: none"> - Comparing Shapes
c) Describe a circle using terms such as round and curved.	<ul style="list-style-type: none"> • Songs: Marmot Shapes; Shapes, Shapes, Shapes • Circle, Square, Triangle, Rectangle • Simple Shapes 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
d) Distinguish between examples and nonexamples of identified plane figures (circles, triangles, squares, and rectangles).	<ul style="list-style-type: none"> Songs: Marmot Shapes; Shapes, Shapes, Shapes Circle, Square, Triangle, Rectangle Simple Shapes 	
e) Compare and contrast two plane figures using characteristics to describe similarities and differences.	<ul style="list-style-type: none"> Song: Corners and Sides Simple Shapes Congruence Tangrams Similar Figures 	<ul style="list-style-type: none"> 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). <ul style="list-style-type: none"> Comparing Shapes
f) Construct plane figures (circles, triangles, squares, and rectangles) using a variety of materials (e.g., straws, sticks, pipe cleaners).	<ul style="list-style-type: none"> Geoboard Tangrams 	
K.MG.3 The student will describe the units of time represented in a calendar. a) Identify a calendar as a tool used to measure time.	<ul style="list-style-type: none"> Songs: Days in a Month; Months of the Year Calendar 	
b) Name the days of the week and state that there are seven days in one week.	<ul style="list-style-type: none"> Song: Days of the Week 	
c) Determine the day before and after a given day (e.g., yesterday, today, tomorrow).	<ul style="list-style-type: none"> Today Yesterday/Tomorrow 	
d) Name the twelve months of the year and state that there are twelve months in one year.	<ul style="list-style-type: none"> Song: Months of the Year 	
e) Distinguish between days of the week and months of the year.	<ul style="list-style-type: none"> Songs: Days of the Week; Days in a Month; Months of the Year Calendar 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics		
<p>K.PS.1 The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on object graphs and picture graphs.</p> <p>a) Sort and classify concrete objects into appropriate subsets (categories) based on one attribute (e.g., size, shape, color, thickness).</p>	<ul style="list-style-type: none"> • Song: All Sorts of Laundry • Book: Buttons, Buttons • Sort 	<ul style="list-style-type: none"> • Classifying objects.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. <ul style="list-style-type: none"> - Let's Sort - Sort
<p>b) Describe and label attributes (e.g., size, color, shape) of a set of objects (e.g., coins, counters, buttons) that has been sorted.</p>	<ul style="list-style-type: none"> • Song: All Sorts of Laundry • Book: Buttons, Buttons • Sort 	<ul style="list-style-type: none"> • Measurable attributes.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. <ul style="list-style-type: none"> - Filling Table - Order It Up - Straw Rulers - Measuring Walk - Heavy or Light - Make A Balance - Measurable Attributes
<p>c) Pose questions, given a predetermined context, that require the collection of data (limited to 25 or fewer data points for no more than four categories).</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Book: One More Cat • Tally Marks • Picture Graphs 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Ice-Cream Sundae - Make a Real Object Graph - Our Favorite Foods - How Many? - Bugs! - How Big Is Your Family?

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
d) Determine the data needed to answer a posed question, and collect the data using various methods (e.g., counting objects, drawing pictures).	<ul style="list-style-type: none"> Songs: Tallying; Graphing Book: One More Cat Tally Marks Picture Graphs 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Ice-Cream Sundae Make a Real Object Graph Our Favorite Foods How Many? Bugs! How Big Is Your Family?
e) Organize and represent a data set (vertically or horizontally) by sorting concrete objects into organized groups to form a simple object graph.	<ul style="list-style-type: none"> Songs: Tallying; Graphing Book: One More Cat Tally Marks Picture Graphs 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Ice-Cream Sundae Make a Real Object Graph Our Favorite Foods How Many? Bugs! How Big Is Your Family?
f) Organize and represent a data set (vertically or horizontally) using pictures to form a simple picture graph.	<ul style="list-style-type: none"> Songs: Tallying; Graphing Book: One More Cat Tally Marks Picture Graphs 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Ice-Cream Sundae Make a Real Object Graph Our Favorite Foods How Many? Bugs! How Big Is Your Family?

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
<p>g) Analyze data represented in object graphs and picture graphs and communicate results:</p> <p>i) ask and answer questions about the data represented in object graphs and picture graphs (e.g., how many in each category, which categories have the greatest, least, or the same amount of data); and</p>	<ul style="list-style-type: none"> Songs: Tallying; Graphing Book: One More Cat Tally Marks Picture Graphs 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Ice-Cream Sundae Make a Real Object Graph Our Favorite Foods How Many? Bugs! How Big Is Your Family?
<p>ii) draw conclusions about the data and make predictions based on the data.</p>	<ul style="list-style-type: none"> Songs: Tallying; Graphing Book: One More Cat Tally Marks Picture Graphs 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Ice-Cream Sundae Make a Real Object Graph Our Favorite Foods How Many? Bugs! How Big Is Your Family?
Patterns, Functions, and Algebra		
<p>K.PFA.1 The student will identify, describe, extend, and create simple repeating patterns using various representations.</p> <p>a) Identify and describe the core found in repeating patterns.</p>	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
<p>b) Extend a repeating pattern by adding at least two complete repetitions of the core to the pattern.</p>	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
<p>c) Create and describe a repeating pattern using objects, colors, sounds, movements, or pictures.</p>	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
GRADE 1		
Number and Number Sense		
1.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 120. a) Count forward orally by ones from 0 to 120 starting at any number between 0 and 120.	<ul style="list-style-type: none"> Song: Counting On Count On Number Chart 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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
b) Count backward orally by ones when given any number between 1 and 30.	<ul style="list-style-type: none"> Song: Counting Backward Book: A Space Adventure Counting Back Count Down 	
c) Represent forward counting patterns when counting by groups of 5 and groups of 10 up to 120 using a variety of tools (e.g., objects, coins, 120 chart).	<ul style="list-style-type: none"> Song: Skip Counting Skip Count Make and Count Groups Place Value Number Chart 	
d) Represent forward counting patterns when counting by groups of 2 up to at least 30 using a variety of tools (e.g., beaded number strings, number paths [a prelude to number lines], 120 chart).	<ul style="list-style-type: none"> Song: Skip Counting Skip Count Number Chart 	
e) Group a collection of up to 120 objects into tens and ones, and count to determine the total (e.g., 5 groups of ten and 6 ones is equal to 56 total objects).	<ul style="list-style-type: none"> Song: Skip Counting Skip Count Make and Count Groups Number Chart Place Value 	
f) Identify a penny, nickel, and dime by their attributes and describe the number of pennies equivalent to a nickel and a dime.	<ul style="list-style-type: none"> Songs: Save Your Pennies; Money Coin Identification Coin Value Count Dimes, Nickels, and Pennies 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense		
g) Count by ones, fives, or tens to determine the value of a collection of like coins (pennies, nickels, or dimes), whose total value is 100 cents or less.	<ul style="list-style-type: none"> Songs: Skip Counting; Save Your Pennies; Money Skip Counting Coin Identification Coin Value Count Dimes, Nickels, and Pennies 	
<p>1.NS.2 The student will represent, compare, and order quantities up to 120.</p> <p>a) Read and write numerals 0-120 in sequence and out of sequence.</p>	<ul style="list-style-type: none"> Song: Counting On Order Numbers Number Chart 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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
b) Estimate the number of objects (up to 120) in a given collection and justify the reasonableness of an answer.	<ul style="list-style-type: none"> Song: At the Market Logic Games 	
c) Create a concrete or pictorial representation of a number using tens and ones and write the corresponding numeral up to 120 (e.g., 47 can be represented as 47 ones or it can be grouped into 4 tens with 7 ones left over).	<ul style="list-style-type: none"> Song: Place Value Place Value 	<ul style="list-style-type: none"> Tens as a bundle of ones.pdf: 10 can be thought of as a bundle of ten ones—called a “ten.” <ul style="list-style-type: none"> Popsicles to Ten
d) Describe the number of groups of tens and ones when given a two-digit number and justify reasoning.	<ul style="list-style-type: none"> Song: Place Value Place Value of 2-digit Numbers Add with Manipulatives 	<ul style="list-style-type: none"> Tens as a bundle of ones.pdf: 10 can be thought of as a bundle of ten ones—called a “ten.” <ul style="list-style-type: none"> Popsicles to Ten
e) Compare two numbers between 0 and 120 represented pictorially or with concrete objects using the terms greater than, less than, or equal to.	<ul style="list-style-type: none"> Song: Greater Than, Less Than Book: For the Birds Greater Than, Less Than More Than Fewer Than Place Value Greater Than, Less Than (2-digit Numbers) 	<ul style="list-style-type: none"> 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 $<$. <ul style="list-style-type: none"> More or Less Spinner Catch Me if You Can! What Are You Looking For? Two-Pile Sort

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
f) Order three sets, each set containing up to 120 objects, from least to greatest, and greatest to least.	<ul style="list-style-type: none"> Songs: Greater Than, Less Than; Large, Larger, Largest Book: For the Birds Order Numbers Greater Than, Less Than More Than Fewer Than Place Value Greater Than, Less Than (2-digit Numbers) 	
<p>1.NS.3 The student will use mathematical reasoning and justification to solve contextual problems that involve partitioning models into two and four equal-sized parts.</p> <p>a) Represent equal shares of a whole with two or four sharers, when given a contextual problem.</p>	<ul style="list-style-type: none"> Song: Fractions Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins Equal-part Fractions Label Parts of Fractions 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Make It Equal Fraction Friends Fraction Train Halves, Thirds, Fourths Equal Parts
b) Represent and name halves and fourths of a whole, using a region/area model (e.g., pie pieces, pattern blocks, paper folding, drawings) and a set model (e.g., eggs, marbles, counters) limited to two or four items.	<ul style="list-style-type: none"> Song: Fractions Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins Equal-part Fractions Label Parts of Fractions 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Make It Equal Fraction Friends Fraction Train Halves, Thirds, Fourths Equal Parts

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
<p>c) Describe and justify how shares are equal pieces or equal parts of the whole (limited to halves, fourths) when given a contextual problem.</p>	<ul style="list-style-type: none"> • Song: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins • Equal-part Fractions • Label Parts of Fractions 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Make It Equal - Fraction Friends - Fraction Train - Halves, Thirds, Fourths - Equal Parts
Computation and Estimation		
<p>1.CE.1 The student will recall with automaticity addition and subtraction facts within 10 and represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction with whole numbers within 20.</p> <p>a) Recognize and describe with fluency part-part-whole relationships for numbers up to 10 in a variety of configurations.</p>	<ul style="list-style-type: none"> • Songs: Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends • Sums • Make 10 • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
b) Demonstrate fluency with addition and subtraction within 10 by applying reasoning strategies (e.g., count on/count back, one more/one less, doubles, make ten).	<ul style="list-style-type: none"> Songs: Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction; Doubles Book: Five Delicious Muffins Add Groups Subtract Groups Minuends Sums Doubles Make 10 Act Out Addition Act Out Subtraction 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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
c) Recall with automaticity addition and subtraction facts within 10.	<ul style="list-style-type: none"> Songs: Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction Add Groups Subtract Groups Minuends Sums Act Out Addition Act Out Subtraction 	<ul style="list-style-type: none"> Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> 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

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
<p>d) Investigate, recognize, and describe part-part-whole relationships for numbers up to 20 in a variety of configurations (e.g., beaded racks, double ten frames).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Doubles • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - 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
<p>e) Solve addition and subtraction problems within 20 using various strategies (e.g., inverse relationships: if $9 + 3 = 12$ then $12 - 3 = 9$; decomposition using known sums/ differences: $9 + 7$ can be thought of as 9 decomposed into 2 and 7, then use doubles, $7 + 7 = 14$; $14 + 2 = 16$ or decompose the 7 into 1 and 6; make a ten: $1 + 9 = 10$; $10 + 6 = 16$).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On • Books: Facts about Families • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Subtraction Patterns 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - 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

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
<p>f) Represent, solve, and justify solutions to single-step addition and subtraction problems (join, separate, and part-part-whole) within 20, including those in context, using words, objects, drawings, or numbers.</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On • Books: Facts about Families • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Subtraction Patterns 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - 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
<p>g) Determine the unknown whole number that will result in a sum or difference of 10 or 20 (e.g., $14 - \underline{\quad} = 10$ or $15 + \underline{\quad} = 20$).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On • Books: Facts about Families • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Subtraction Patterns • Make 10 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - 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
<p>h) Identify and use (+) as a symbol for addition and (-) as a symbol for subtraction.</p>	<ul style="list-style-type: none"> • Songs: Subtract Those Cars; Bakery Subtraction • Add Groups to 5 • Minuends to 5 • Addition Sentences • Subtraction Sentences 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
i) Describe the equal symbol (=) as a balance representing an equivalent relationship between expressions on either side of the equal symbol (e.g., 6 and 1 is the same as 4 and 3; 6 + 1 is balanced with 4 + 3; 6 + 1 = 4 + 3).	<ul style="list-style-type: none"> Addition and Subtraction Fact Families Addition and Subtraction Relationship Addition Sentences Subtraction Sentences 	<ul style="list-style-type: none"> Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <ul style="list-style-type: none"> Show Me! Tricky Total Domino Addition Domino Subtraction Playground Fact Snake
j) Use concrete materials to model, identify, and justify when two expressions are not equal (e.g., 10 - 3 is not equal to 3 + 5).	<ul style="list-style-type: none"> Addition and Subtraction Fact Families Addition and Subtraction Relationship Addition Sentences Subtraction Sentences 	<ul style="list-style-type: none"> Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <ul style="list-style-type: none"> Show Me! Tricky Total Domino Addition Domino Subtraction Playground Fact Snake
k) Use concrete materials to model an equation that represents the relationship of two expressions of equal value.	<ul style="list-style-type: none"> Addition and Subtraction Fact Families Addition and Subtraction Relationship Addition Sentences Subtraction Sentences 	<ul style="list-style-type: none"> Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <ul style="list-style-type: none"> Show Me! Tricky Total Domino Addition Domino Subtraction Playground Fact Snake
l) Write an equation that could be used to represent the solution to an oral, written, or picture problem.		<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Addition Cubes Addition Stories Going Fishing Let's Count On Act it out Stories Manipulative Stories

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry		
<p>1.MG.1 The student will reason mathematically using nonstandard units to measure and compare objects by length, weight, and volume.</p> <p>a) Use nonstandard units to measure the:</p> <p>i) lengths of two objects (units laid end to end with no gaps or overlaps) and compare the measurements using the terms longer/shorter, taller/shorter, or the same as;</p>	<ul style="list-style-type: none"> • Book: Little Monkey • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Measures of Me - Measure a Handful - Estimating Length - A Fruit and Vegetable - Measure Up! - Inches/Centimeters Rulers
<p>ii) weights of two objects (using a balance scale or a pan scale) and compare the measurements using the terms lighter, heavier, or the same as; and</p>	<ul style="list-style-type: none"> • Measurement Tools • Weight 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
iii) volumes of two containers and compare the measurements using the terms more, less, or the same as.	<ul style="list-style-type: none"> • Measurement Tools • Capacity 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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
b) Measure the length, weight, or volume of the same object or container with two different units and describe how and why the measurements differ.	<ul style="list-style-type: none"> • Measurement Tools 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
1.MG.2 The student will describe, sort, draw, and name plane figures (circles, triangles, squares, and rectangles), and compose larger plane figures by combining simple plane figures. a) Describe triangles, squares, and rectangles using the terms sides, vertices, and angles. Describe a circle using terms such as round and curved.	<ul style="list-style-type: none"> Songs: Marmot Shapes; Corners and Sides Books: The Shape of Things Circle, Square, Triangle, Rectangle Simple Shapes 	<ul style="list-style-type: none"> Two-dimensional shapes.pdf: Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). <ul style="list-style-type: none"> Shapes and Positioning
b) Sort plane figures based on their characteristics (e.g., number of sides, vertices, angles, curved).	<ul style="list-style-type: none"> Songs: Shapes, Shapes, Shapes; Corners and Sides Books: The Shape of Things Circle, Square, Triangle, Rectangle Star, Semicircle, Octagon, Oval, Rhombus Simple Shapes Sort 	
c) Draw and name the plane figure (circle, square, rectangle, triangle) when given information about the number of sides, vertices, and angles.	<ul style="list-style-type: none"> Songs: Shapes, Shapes, Shapes; Marmot Shapes; Corners and Sides Books: The Shape of Things Circle, Square, Triangle, Rectangle Simple Shapes 	
d) Identify, name, and describe representations of circles, squares, rectangles, and triangles, regardless of orientation, in different environments and explain reasoning.	<ul style="list-style-type: none"> Songs: Shapes, Shapes, Shapes; Marmot Shapes; Corners and Sides Books: The Shape of Things Circle, Square, Triangle, Rectangle Simple Shapes 	<ul style="list-style-type: none"> Shape recognition.pdf: Correctly name shapes regardless of their orientations or overall size. <ul style="list-style-type: none"> Shapes Scavenger Hunt Shapes and Positioning
e) Recognize and name the angles found in rectangles and squares as right angles.		
f) Compose larger plane figures by combining two or three simple plane figures (triangles, squares, and/or rectangles).	<ul style="list-style-type: none"> Geoboard Tangrams 	<ul style="list-style-type: none"> Form larger shapes.pdf: Compose simple shapes to form larger shapes. <ul style="list-style-type: none"> Combining Shapes

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
1.MG.3 The student will demonstrate an understanding of the concept of passage of time (to the nearest hour and half-hour) and the calendar. a) Identify different tools to measure time including clocks (analog and digital) and calendar.	<ul style="list-style-type: none"> Songs: Clock Hands; Months of the Year; Telling Time Books: Mr. Romano's Secret: A Time Story Tell Time to the Hour Tell Time to the Half-Hour Calendar Calendar/Graph Weather 	<ul style="list-style-type: none"> Hours and half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks. <ul style="list-style-type: none"> 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
b) Describe the units of time represented on a clock as minutes and hours.	<ul style="list-style-type: none"> Songs: Clock Hands; Telling Time Tell Time Compare Minutes to Hours 	
c) Tell time to the hour and half-hour, using analog and digital clocks.	<ul style="list-style-type: none"> Songs: Clock Hands; Telling Time Books: Mr. Romano's Secret: A Time Story Tell Time to the Hour Tell Time to the Half-Hour 	<ul style="list-style-type: none"> Hours and half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks. <ul style="list-style-type: none"> 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
d) Describe the location of the hour hand relative to time to the hour and half-hour on an analog clock.	<ul style="list-style-type: none"> Songs: Clock Hands; Telling Time Tell Time to the Hour Tell Time to the Half-Hour 	<ul style="list-style-type: none"> Hours and half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks. <ul style="list-style-type: none"> 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

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
e) Describe the location of the minute hand relative to time to the hour and half-hour on an analog clock.	<ul style="list-style-type: none"> Songs: Clock Hands; Telling Time Tell Time to the Hour Tell Time to the Half-Hour Tell Time to the Minute 	
f) Match the time shown on a digital clock to an analog clock to the hour and half-hour.	<ul style="list-style-type: none"> Tell Time to the Hour Tell Time to the Half-Hour 	
g) Identify specific days/dates on a calendar (e.g., What date is Saturday? How many Fridays are in October?).	<ul style="list-style-type: none"> Calendar Calendar/Graph Weather Today 	
h) Use ordinal numbers first through tenth to describe the relative position of specific days/dates (e.g., What is the first Monday in October? What day of the week is May 6th?).	<ul style="list-style-type: none"> Song: Ordinals Book: The Circus Came to Town Calendar Ordinal Numbers 	
i) Determine the day/date before and after a given day/date (e.g., Today is the 8th, so yesterday was the ?), and a date that is a specific number of days/weeks in the past or future (e.g., Tim's birthday is in 10 days, what will be the date of his birthday?).	<ul style="list-style-type: none"> Today Yesterday/Tomorrow Calendar 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics		
<p>1.PS.1 The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on object graphs, picture graphs, and tables.</p> <p>a) Sort and classify concrete objects into appropriate subsets (categories) based on one or two attributes, such as size, shape, color, and/or thickness (e.g., sort a set of objects that are both red and thick).</p>	<ul style="list-style-type: none"> • Songs: Same and Different; All Sorts of Laundry • Book: Buttons, Buttons • Sort • Make and Count Groups • Length • Big and Little • Tall and Short • Heavy and Light • Size 	<ul style="list-style-type: none"> • Classifying objects.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. <ul style="list-style-type: none"> - Let's Sort - Sort
<p>b) Describe and label attributes of a set of objects that has been sorted.</p>	<ul style="list-style-type: none"> • Songs: Same and Different; All Sorts of Laundry; Adjectives Describe • Book: Buttons, Buttons • Sort • Make and Count Groups • Length • Big and Little • Tall and Short • Heavy and Light • Size 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
c) Pose questions, given a predetermined context, that require the collection of data (limited to 25 or fewer data points for no more than four categories).	<ul style="list-style-type: none"> Songs: Tallying; Graphing Books: One More Cat; The Booneville Nine Tally Marks Graphs Make a Table 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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?
d) Determine the data needed to answer a posed question and collect the data using various methods (e.g., counting objects, drawing pictures, tallying).	<ul style="list-style-type: none"> Songs: Tallying; Graphing Books: Painting by Number; One More Cat; The Booneville Nine Tally Marks Bar Graphs Picture Graphs Graphs Make a Table 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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?

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
<p>e) Organize and represent a data set by sorting the collected data using various methods (e.g., tallying, T-charts).</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; The Booneville Nine • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table • Use Graphs and Tables 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?
<p>f) Represent a data set (vertically or horizontally) using object graphs, picture graphs, and tables.</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; The Booneville Nine • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
<p>g) Analyze data represented in object graphs, picture graphs, and tables and communicate results:</p> <p>i) ask and answer questions about the data represented in object graphs, picture graphs, and tables (e.g., total number of data points represented, how many in each category, how many more or less are in one category than another); and</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; The Booneville Nine • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?
<p>ii) draw conclusions about the data and make predictions based on the data.</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; The Booneville Nine • Tally Marks • Graphs • Make a Table • Use Graphs and Tables 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Patterns, Functions, and Algebra		
1.PFA.1 The student will identify, describe, extend, create, and transfer repeating patterns and increasing patterns using various representations. a) Identify and describe repeating and increasing patterns.	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
b) Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, colors, movements, pictures, or geometric figures.	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
c) Create a repeating or increasing pattern using objects, pictures, movements, colors, or geometric figures.	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
d) Transfer a repeating or increasing pattern from one form to another.	<ul style="list-style-type: none"> Song: Train Station Patterns Patterns Pattern: AB; ABB; ABC 	
GRADE 2		
Number and Number Sense		
2.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 200. a) Represent forward counting patterns when counting by groups of 2 up to at least 50, starting at various multiples of 2 and using a variety of tools (e.g., objects, number lines, hundreds charts).	<ul style="list-style-type: none"> Songs: Skip Counting; Counting On Skip Count by 2 Number Patterns Number Chart Number Line 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
b) Represent forward counting patterns created when counting by groups of 5s, 10s, and 25s starting at various multiples up to at least 200 using a variety of tools (e.g., objects, number lines, hundreds charts).	<ul style="list-style-type: none"> Songs: Skip Counting; Counting On Skip Count by 5 Skip Count by 10 Number Patterns Number Chart Number Line 	
c) Describe and use patterns in skip counting by multiples of 2 (to at least 50), and multiples of 5, 10, and 25 (to at least 200) to justify the next number in the counting sequence.	<ul style="list-style-type: none"> Song: Skip Counting Skip Count by 2 Skip Count by 5 Skip Count by 10 Number Patterns Number Chart Sequences of 2-digit Numbers Sequences of 3-digit Numbers 	
d) Represent forward counting patterns when counting by groups of 100 up to at least 1,000 starting at 0 using a variety of tools (e.g., objects, number lines, calculators, one thousand charts).	<ul style="list-style-type: none"> Number Patterns Number Chart Number Line Patterns of 2-digit Numbers Patterns of 3-digit Numbers Sequences of 2-digit Numbers Sequences of 3-digit Numbers 	
e) Represent backward counting patterns when counting by groups of 10 from 200 or less using a variety of tools including objects, number lines, calculators, and hundreds charts.	<ul style="list-style-type: none"> Song: Counting Backward Book: A Space Adventure Counting Back Count Down Number Line Number Chart Nothing Patterns 	
f) Describe and use patterns in skip counting backwards by 10s (from at least 200) to justify the next number in the counting sequence.	<ul style="list-style-type: none"> Counting Back Count Down Number Line Number Chart Number Patterns 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
g) Choose a reasonable estimate up to 1,000 when given a contextual problem (e.g., What would be the best estimate for the number of students in our school – 5, 50, or 500?).	<ul style="list-style-type: none"> Song: At the Market Logic Games 	
h) Represent even numbers (up to 50) with concrete objects, using two equal groups or two equal addends.	<ul style="list-style-type: none"> Song: Odd Todd and Even Steven Make and Count Groups 	<ul style="list-style-type: none"> Odd and even recognition.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members. <ul style="list-style-type: none"> Missing Patterns Counting by 2s What's My Number?
i) Represent odd numbers (up to 50) with concrete objects, using two equal groups with one leftover or two equal addends plus 1.	<ul style="list-style-type: none"> Song: Odd Todd and Even Steven Make and Count Groups Doubles Plus 1 	<ul style="list-style-type: none"> Odd and even recognition.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members. <ul style="list-style-type: none"> Missing Patterns Counting by 2s What's My Number?
j) Determine whether a number (up to 50) is even or odd using concrete objects and justify reasoning (e.g., dividing collections of objects into two equal groups, pairing objects).	<ul style="list-style-type: none"> Song: Odd Todd and Even Steven Book: Buttons, Buttons Make and Count Groups 	<ul style="list-style-type: none"> Odd and even recognition.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members. <ul style="list-style-type: none"> Missing Patterns Counting by 2s What's My Number?
2.NS.2 The student will demonstrate an understanding of the ten-to-one relationships of the base 10 number system to represent, compare, and order whole numbers up to 999. a) Write the three-digit whole number represented by a given model (e.g., concrete objects, pictures of base 10 blocks).	<ul style="list-style-type: none"> Song: Place Value Place Value Number Chart 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
b) Read, write, and represent three-digit numbers in standard form, expanded form, and word form, using concrete or pictorial representations.	<ul style="list-style-type: none"> Expanded Notation Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> Read and write numbers to 1000.pdf: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. <ul style="list-style-type: none"> Cube Trails Race for a Flat High/Low Number Cube Throw Lucky Five
c) Apply patterns within the base 10 system to determine and communicate, orally and in written form, the place (ones, tens, hundreds) and value of each digit in a three-digit whole number (e.g., in 352, the 5 represents 5 tens and its value is 50).	<ul style="list-style-type: none"> Song: Place Value Number Patterns Number Chart Number Line Place Value Patterns of 3-digit Numbers Sequences of 3-digit Numbers 	
d) Investigate and explain the ten-to-one relationships among ones, tens, and hundreds, using models.	<ul style="list-style-type: none"> Song: Place Value Number Patterns Number Chart Place Value Patterns of 3-digit Numbers Sequences of 3-digit Numbers 	
e) Compose and decompose whole numbers up to 200 by making connections between a variety of models (e.g., base 10 blocks, place value cards, presented orally, in expanded or standard form) and counting strategies (e.g., 156 can be 1 hundred, 5 tens, 6 ones; 1 hundred, 4 tens, 16 ones; 15 tens, 6 ones).	<ul style="list-style-type: none"> Song: Place Value Number Patterns Number Chart Place Value Patterns of 2-digit Numbers Patterns of 3-digit Numbers Sequences of 2-digit Numbers Sequences of 3-digit Numbers 	<ul style="list-style-type: none"> 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). <ul style="list-style-type: none"> Toss It 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). <ul style="list-style-type: none"> My Three-Digit Numbers
f) Plot and justify the position of a given number up to 100 on a number line with pre-marked benchmarks of 1s, 2s, 5s, 10s, or 25s.	<ul style="list-style-type: none"> Number Line 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
g) Compare two whole numbers, each 999 or less, represented concretely, pictorially, or symbolically, using words (greater than, less than, or equal to) and symbols)	<ul style="list-style-type: none"> Place Value Greater Than, Less Than (2-digit Numbers) Greater Than, Less Than (3-digit Numbers) Place Value of 2-digit Numbers Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> 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 $<$. <ul style="list-style-type: none"> More or Less Spinner Catch Me if You Can! What Are You Looking For? Two-Pile Sort 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. <ul style="list-style-type: none"> More or Less The Hands Have It! Larger or Smaller? Comparing Number Cards $<$, $>$, $=$ Cards Greater Than, Less Than, Equal To
h) Order up to three whole numbers, each 999 or less, represented concretely, pictorially, or symbolically from least to greatest and greatest to least.	<ul style="list-style-type: none"> Order Numbers Number Patterns Number Chart Patterns of 2-digit Numbers Patterns of 3-digit Numbers Sequences of 2-digit Numbers Sequences of 3-digit Numbers 	
2.NS.3 The student will use mathematical reasoning and justification to solve contextual problems that involve partitioning models into equal-sized parts (halves, fourths, eighths, thirds, and sixths). a) Model and describe fractions as representing equal-size parts of a whole.	<ul style="list-style-type: none"> Song: Fractions Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins Fractions Equal Part Fractions Label Parts of Fractions Fractions of Regions Fractions of Groups 	<ul style="list-style-type: none"> Fractions.pdf: 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. <ul style="list-style-type: none"> Frenzied Fraction Fun Fabulous Fractions

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
b) Describe the relationship between the number of fractional parts needed to make a whole and the size of the parts (i.e., as the whole is divided into more parts, each part becomes smaller).	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
c) Compose the whole for a given fractional part and its value (in context) for halves, fourths, eighths, thirds, and sixths (e.g., when given $\frac{1}{4}$, determine how many pieces would be needed to make $\frac{4}{4}$).	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
d) Using same-size fraction pieces, from a region/area model, count by unit fractions up to two wholes (e.g., zero one-fourths, one one-fourth, two one-fourths, three one-fourths, four one-fourths, five one-fourths; or zero-fourths, one-fourth, two-fourths, three-fourths, four-fourths, five-fourths).	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
e) Given a context, represent, name, and write fractional parts of a whole for halves, fourths, eighths, thirds, and sixths using: i) region/area models (e.g., pie pieces, pattern blocks, geoboards);	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
ii) length models (e.g., paper fraction strips, fraction bars, rods, number lines); and	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
iii) set models (e.g., chips, counters, cubes).	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
f) Compare unit fractions for halves, fourths, eighths, thirds, and sixths using words (greater than, less than or equal to) and symbols ($>$,	<ul style="list-style-type: none"> • Song: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Label Parts of Fractions • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: 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. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions
2.NS.4 The student will solve problems that involve counting and representing money amounts up to \$2.00. a) Identify a quarter and its value and determine multiple ways to represent the value of a quarter using pennies, nickels, and/or dimes.	<ul style="list-style-type: none"> • 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 • Count Coins • Equivalent Sums of Money 	<ul style="list-style-type: none"> • Coin Identification and Value: Identify U.S. coins, including pennies, nickels, dimes, and quarters, and understand their relative values. Determine the value of a collection of U.S. coins up to one dollar. <ul style="list-style-type: none"> - Coin Hopscotch - Counting Money - Coin Corners—Review

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Number Sense <i>continued</i>		
b) Count by ones, fives, tens, and twenty-fives to determine the value of a collection of mixed coins and one-dollar bills whose total value is \$2.00 or less.	<ul style="list-style-type: none"> 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 Count Coins Count Bills and Coins 	<ul style="list-style-type: none"> Coin Identification and Value: Identify U.S. coins, including pennies, nickels, dimes, and quarters, and understand their relative values. Determine the value of a collection of U.S. coins up to one dollar. <ul style="list-style-type: none"> Coin Hopscotch Counting Money Coin Corners—Review
c) Construct a set of coins and/or bills to total a given amount of money whose value is \$2.00 or less.	<ul style="list-style-type: none"> 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 Count Coins Count Bills and Coins Equivalent Sums of Money 	<ul style="list-style-type: none"> Coin Identification and Value: Identify U.S. coins, including pennies, nickels, dimes, and quarters, and understand their relative values. Determine the value of a collection of U.S. coins up to one dollar. <ul style="list-style-type: none"> Coin Hopscotch Counting Money Coin Corners—Review
d) Represent the value of a collection of coins and one-dollar bills (limited to \$2.00 or less) using the cent (¢) and dollar (\$) symbols and decimal point (.).	<ul style="list-style-type: none"> 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 Count Coins Count Bills and Coins 	<ul style="list-style-type: none"> Coin Identification and Value: Identify U.S. coins, including pennies, nickels, dimes, and quarters, and understand their relative values. Determine the value of a collection of U.S. coins up to one dollar. <ul style="list-style-type: none"> Coin Hopscotch Counting Money Coin Corners—Review

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation		
<p>2.CE.1 The student will recall with automaticity addition and subtraction facts within 20 and estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction with whole numbers where addends or minuends do not exceed 100.</p> <p>a) Apply strategies (e.g., rounding to the nearest 10, compatible numbers, other number relationships) to estimate a solution for single-step addition or subtraction problems, including those in context, where addends and minuends do not exceed 100.</p>	<ul style="list-style-type: none"> • Song: Rounding • Book: The Fable Fair • Round to Tens • Addition and Subtraction Relationship • Addition • Subtraction 	
<p>b) Apply strategies (e.g., the use of concrete and pictorial models, place value, properties of addition, the relationship between addition and subtraction) to determine the sum or difference of two whole numbers where addends or minuends do not exceed 100.</p>	<ul style="list-style-type: none"> • Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction 	<ul style="list-style-type: none"> • Add and subtract 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. <ul style="list-style-type: none"> - Addition of Two-Digit Numbers - Tic Tac Toe - Subtraction of Two-Digit Numbers

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
c) Represent, solve, and justify solutions to single-step and multistep contextual problems (e.g., join, separate, part-part-whole, comparison) involving addition or subtraction of whole numbers where addends or minuends do not exceed 100.	<ul style="list-style-type: none"> Books: Painting by Number; Circus 20 Place Value Addition and Subtraction Relationship Commutative Properties of Addition Addition Subtraction Add without Regrouping Add with Regrouping Subtract without regrouping Subtract with Regrouping 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Animal Math Picture Problems Color the Chart Think About it Differently Act it Out Guess and Check
d) Demonstrate fluency with addition and subtraction within 20 by applying reasoning strategies (e.g., doubles, near doubles, make-a-ten, compensations, inverse relationships).	<ul style="list-style-type: none"> Songs: Fact Families; Doubles; Doubles Plus 1 Subtraction Patterns Addition Facts to 20 Doubles Doubles Plus 1 Make 10 Addition and Subtraction Relationship Commutative Properties of Addition 	<ul style="list-style-type: none"> 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.
e) Recall with automaticity addition and subtraction facts within 20.	<ul style="list-style-type: none"> Songs: Fact Families; Doubles; Doubles Plus 1 Subtraction Patterns Addition Facts to 20 Doubles Doubles Plus 1 Make 10 Addition and Subtraction Relationship Commutative Properties of Addition Mental Math Games 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Sets of flashcards: <ul style="list-style-type: none"> Addition—horizontal; vertical Subtraction—horizontal; vertical Addition and subtraction—horizontal and vertical
f) Use patterns, models, and strategies to make generalizations about the algebraic properties for fluency (e.g., $4 + 3$ is equal to $3 + 4$; $0 + 8 = 8$).	<ul style="list-style-type: none"> Song: Fact Families Book: Facts About Families Addition and Subtraction Fact Families Addition and Subtraction Relationship Addition Sentences Subtraction Sentences 	<ul style="list-style-type: none"> 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.

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Computation and Estimation <i>continued</i>		
g) Determine the missing number in an equation (number sentence) through modeling and justification with addition and subtraction within 20 (e.g., $3 + _ = 5$ or $_ + 2 = 5$; $5 - _ = 3$ or $5 - 2 = _$).	<ul style="list-style-type: none"> • Song: Fact Families • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences • Missing Addends • Missing Minuends • Missing Subtrahends • Missing Minuends and Subtrahends 	<ul style="list-style-type: none"> • 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.
h) Use inverse relationships to write all related facts connected to a given addition or subtraction fact model within 20 (e.g., given a model for $3 + 4 = 7$, write $4 + 3 = 7$, $7 - 4 = 3$, and $7 - 3 = 4$).	<ul style="list-style-type: none"> • Song: Fact Families • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences 	<ul style="list-style-type: none"> • 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.
i) Describe the not equal symbol (\neq) as representing a relationship where expressions on either side of the not equal symbol represent different values and justify reasoning.		
j) Represent and justify the relationship between values and expressions as equal or not equal using appropriate models and/or symbols (e.g., $9 + 24 = 10 + 23$; $45 - 9 = 46 - 10$; $15 + 16 \neq 31 + 15$).	<ul style="list-style-type: none"> • Song: Greater Than, Less Than • Greater Than, Less Than • More Than, Fewer Than 	<ul style="list-style-type: none"> • Equal sign.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <ul style="list-style-type: none"> - Show Me! - Tricky Total - Domino Addition - Domino Subtraction - Playground Fact Snake

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry		
<p>2.MG.1 The student will reason mathematically using standard units (U.S. Customary) with appropriate tools to estimate, measure, and compare objects by length, weight, and liquid volume to the nearest whole unit.</p> <p>a) Explain the purpose of various measurement tools and how to use them appropriately by:</p> <p>i) identifying a ruler as an instrument to measure length;</p>	<ul style="list-style-type: none"> • Measurement Tools • Length 	<ul style="list-style-type: none"> • Measurement tools.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. <ul style="list-style-type: none"> - Ready, Set, Measure - Treasure Hunt - Centimeter Ruler - Inch Ruler - Let's Measure in Centimeters! - Let's Measure in Inches!
<p>ii) identifying different types of scales as instruments to measure weight; and</p>	<ul style="list-style-type: none"> • Measurement Tools • Weight 	
<p>iii) identifying different types of measuring cups as instruments to measure liquid volume.</p>	<ul style="list-style-type: none"> • Measurement Tools • Capacity 	
<p>b) Use U.S. Customary units to estimate, measure, and compare the two for reasonableness:</p> <p>i) the length of an object to the nearest inch, using a ruler;</p>	<ul style="list-style-type: none"> • Measurement Tools • Length 	<ul style="list-style-type: none"> • Measurement tools.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. <ul style="list-style-type: none"> - Ready, Set, Measure - Treasure Hunt - Centimeter Ruler - Inch Ruler - Let's Measure in Centimeters! - Let's Measure in Inches!
<p>ii) the weight of an object to the nearest pound, using a scale; and</p>	<ul style="list-style-type: none"> • Measurement Tools • Weight 	
<p>iii) the liquid volume of a container to the nearest cup, using a measuring cup.</p>	<ul style="list-style-type: none"> • Measurement Tools • Capacity 	

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
2.MG.2 The student will demonstrate an understanding of the concept of time to the nearest five minutes, using analog and digital clocks. a) Identify the number of minutes in an hour (60 minutes) and the number of hours in a day (24 hours).	<ul style="list-style-type: none"> 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 	
b) Determine the unit of time (minutes, hours, days, or weeks) that is most appropriate when measuring a given activity or context and explain reasoning (e.g., Would you measure the time it takes to brush your teeth in minutes or hours?).	<ul style="list-style-type: none"> Songs: Days of the Week; Months of the Year Book: How Long Is a Minute? Compare Minutes to Hours Observe a Simple System 	
c) Show, tell, and write time to the nearest five minutes, using analog and digital clocks.	<ul style="list-style-type: none"> Songs: Telling Time; Clock Hands Book: Mr. Romano's Secret: A Time Story Tell Time Tell Time to Five Minutes Tell Time to the Minute 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Matching Clocks Cartoon Captions Time to 5 Minutes
d) Match a written time (e.g., 1:35, 6:20, 9:05) to the time shown on an analog clock to the nearest five minutes.	<ul style="list-style-type: none"> Song: Telling Time Book: Mr. Romano's Secret: A Time Story Tell Time Tell Time to Five Minutes Tell Time to the Minute 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Matching Clocks Cartoon Captions Time to 5 Minutes
2.MG.3 The student will identify, describe, and create plane figures (including circles, triangles, squares, and rectangles) that have at least one line of symmetry and explain its relationship with congruency. a) Explore a figure using a variety of tools (e.g., paper folding, geoboards, drawings) to show and justify a line of symmetry, if one exists.	<ul style="list-style-type: none"> Song: Symmetry Book: Symmetry and Me Symmetry Geoboard 	

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Geometry <i>continued</i>		
b) Create figures with at least one line of symmetry using various concrete and pictorial representations.	<ul style="list-style-type: none"> Song: Symmetry Book: Symmetry and Me Symmetry Geoboard 	
c) Describe the two resulting figures formed by a line of symmetry as being congruent (having the same shape and size).	<ul style="list-style-type: none"> Song: Congruent Parts Congruence 	
<p>2.MG.4 The student will describe, name, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms).</p> <p>a) Trace faces of solid figures (cubes and rectangular prisms) to create the set of plane figures related to the solid figure.</p>	<ul style="list-style-type: none"> Songs: Shapes, Shapes, Shapes; Corners and Sides; Kites Book: The Shape of Things Circle, Square, Triangle, Rectangle Star, Semicircle, Octagon, Oval, Rhombus Space Shapes World Shapes Geoboard 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Making Shapes Shapes Review
b) Compare and contrast models and nets (cutouts) of cubes and rectangular prisms (e.g., number and shapes of faces, edges, vertices).	<ul style="list-style-type: none"> Song: Corners and Sides Book: The Shape of Things Space Shapes World Shapes Geoboard 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Making Shapes Shapes Review
c) Given a concrete or pictorial model, name and describe the solid figure (sphere, cube, and rectangular prism) by its characteristics (e.g., number of edges, number of vertices, shapes of faces).	<ul style="list-style-type: none"> Song: Corners and Sides Book: The Shape of Things Space Shapes World Shapes Circle, Square, Triangle, Rectangle Star, Semicircle, Octagon, Oval, Rhombus Geoboard 	
d) Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms) according to their characteristics (e.g., number and shapes of their faces, edges, vertices).	<ul style="list-style-type: none"> Song: Corners and Sides Book: The Shape of Things Space Shapes World Shapes Circle, Square, Triangle, Rectangle Star, Semicircle, Octagon, Oval, Rhombus 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics		
<p>2.PS.1 The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on pictographs and bar graphs.</p> <p>a) Pose questions, given a predetermined context, that require the collection of data (limited to 25 or fewer data points for no more than six categories).</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; The Booneville Nine • Tally Marks • Graphs 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - 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?
<p>b) Determine the data needed to answer a posed question and collect the data using various methods (e.g., voting; creating lists, tables, or charts; tallying).</p>	<ul style="list-style-type: none"> • Songs: Graphing; Tallying • Books: One More Cat; The Booneville Nine • Graphs • Tally Marks • Make a Table • Bar Graphs • Picture Graphs • Use Graphs and Tables 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Questions and Answers - Library Book Survey - Playground Survey - Rock Collections - Use Graphs and Tables
<p>c) Organize and represent a data set using a pictograph where each symbol represents up to 2 data points. Determine and use a key to assist in the analysis of the data.</p>	<ul style="list-style-type: none"> • Songs: Graphing; Tallying • Books: One More Cat; The Booneville Nine • Graphs • Picture Graphs • Make a Table • Use Graphs and Tables 	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> - Questions and Answers - Library Book Survey - Playground Survey - Rock Collections - Use Graphs and Tables

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Probability and Statistics <i>continued</i>		
d) Organize and represent a data set using a bar graph with a title and labeled axes (limited to 25 or fewer data points for up to six categories, and limit increments of scale to multiples of 1 or 2).	<ul style="list-style-type: none"> Songs: Graphing; Tallying Books: One More Cat; The Booneville Nine Graphs Make a Table Bar Graphs Use Graphs and Tables 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Questions and Answers Library Book Survey Playground Survey Rock Collections Use Graphs and Tables
e) Analyze data represented in pictographs and bar graphs and communicate results: i) ask and answer questions about the data represented in pictographs and bar graphs (e.g., total number of data points represented, how many in each category, how many more or less are in one category than another). Pictograph keys will be limited to symbols representing 1, 2, 5, or 10 pieces of data and bar graphs will be limited to scales with increments in multiples of 1, 2, 5, or 10; and	<ul style="list-style-type: none"> Songs: Graphing; Tallying Books: One More Cat; The Booneville Nine Graphs Picture Graphs Bar Graphs Use Graphs and Tables 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Questions and Answers Library Book Survey Playground Survey Rock Collections Use Graphs and Tables
ii) draw conclusions about the data and make predictions based on the data.	<ul style="list-style-type: none"> Songs: Graphing; Tallying Books: One More Cat; The Booneville Nine Graphs Picture Graphs Bar Graphs Use Graphs and Tables 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Questions and Answers Library Book Survey Playground Survey Rock Collections Use Graphs and Tables

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Patterns, Functions, and Algebra		
2.PFA.1 The student will describe, extend, create, and transfer repeating and increasing patterns (limited to addition of whole numbers) using various representations. a) Identify and describe repeating and increasing patterns.	<ul style="list-style-type: none"> • Song: Train Station Patterns • Book: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game 	
b) Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, pictures, and numbers.	<ul style="list-style-type: none"> • Song: Train Station Patterns • Book: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game 	
c) Create a repeating or increasing pattern using various representations (e.g., objects, pictures, numbers).	<ul style="list-style-type: none"> • Song: Train Station Patterns • Book: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game 	
d) Transfer a given repeating or increasing pattern from one form to another (e.g., objects, pictures, numbers) and explain the connection between the two patterns.	<ul style="list-style-type: none"> • Song: Train Station Patterns • Book: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SCIENCE		
KINDERGARTEN		
Scientific and Engineering Practices		
K.1 The student will demonstrate an understanding of scientific and engineering practices by		
a) asking questions and defining problems - ask questions based on observations - identify a problem based on need - make predictions based on observations	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation Observe a Simple System 	
b) planning and carrying out investigations - make observations to collect data - identify characteristics and properties of objects through observations - measure the relative length and weight of common objects - record information from investigations	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation Measurement Tools Science Tools 	
c) interpreting, analyzing, and evaluating data - describe patterns - classify and/or sequence objects based on a single physical characteristic or property - organize and represent data - read and interpret data in object graphs, picture graphs, and tables	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation Sort Graphs Bar Graphs Picture Graphs Use Graphs and Tables 	
d) constructing and critiquing conclusions and explanations - make simple conclusions based on data or observations	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation 	

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K.1 The student will demonstrate an understanding of scientific and engineering practices by <i>continued</i>		
e) developing and using models - distinguish between a model and an actual object	<ul style="list-style-type: none"> Books: Imagination Shapes; I Want to Be a Scientist Like Wilbur and Orville Wright 	
f) obtaining, evaluating, and communicating information - communicate comparative measures (e.g., heavier, lighter, longer, shorter, more, less, hotter, colder) - communicate observations using pictures, drawings, and/or speech	<ul style="list-style-type: none"> Capacity Length Big and Little Tall and Short Heavy and Light Size 	<ul style="list-style-type: none"> Measurable attributes.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. <ul style="list-style-type: none"> Filling Table Order It Up Straw Rulers Measuring Walk Heavy or Light Make A Balance Measurable Attributes
Force, Motion, and Energy		
K.2 The student will investigate and understand that pushes and pulls affect the motion of objects. Key ideas include		
a) pushes and pulls can cause an object to move;	<ul style="list-style-type: none"> Song: Push and Pull Book: Mr. Mario's Neighborhood Push and Pull 	Engagement: <ul style="list-style-type: none"> Learning Together: How It Works
b) pushes and pulls can change the direction of an object; and	<ul style="list-style-type: none"> Song: Push and Pull Book: Mr. Mario's Neighborhood Push and Pull 	Engagement: <ul style="list-style-type: none"> Learning Together: How It Works
c) changes in motion are related to the strength of the push or pull.	<ul style="list-style-type: none"> Song: Push and Pull Book: Mr. Mario's Neighborhood Push and Pull 	Engagement: <ul style="list-style-type: none"> Learning Together: How It Works
Matter		
K.3 The student will investigate and understand that physical properties of an object can be described. Properties include		
a) colors;	<ul style="list-style-type: none"> Squirrel's Zoo Colors Color Practice Red, Yellow, and Blue 	<ul style="list-style-type: none"> More-To-Explore Experiment: Colors
b) shapes and forms;	<ul style="list-style-type: none"> Songs: Marmot Shapes; Corners and Sides Circle, Square, Triangle, Rectangle Oval, Star, Semicircle, Rhombus, Octagon 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Shapes Scavenger Hunt

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K.3 The student will investigate and understand that physical properties of an object can be described. Properties include <i>continued</i>		
c) textures and feel; and	<ul style="list-style-type: none"> • Touch 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Temperatures Engagement: <ul style="list-style-type: none"> • Texture Sort
d) relative sizes and weights of objects.	<ul style="list-style-type: none"> • Song: Savanna Size • Capacity • Length • Weight • Big and Little • Tall and Short • Heavy and Light • Size • Measurement Tools 	Engagement: <ul style="list-style-type: none"> • Learning Together: Measurement
K.4 The student will investigate and understand that water is important in our daily lives and has properties. Key ideas include		
a) water has many uses;	<ul style="list-style-type: none"> • Song: Water • Book: Water • Animals Need Water • Plants Need Water • Water • Water Uses • Uses of Water • Care of Water 	Engagement: <ul style="list-style-type: none"> • Learning Together: Our Earth
b) water can be found in many places;	<ul style="list-style-type: none"> • Book: Water Is All Around • Water • Water Sources • Natural Resources 	Engagement: <ul style="list-style-type: none"> • Learning Together: Our Earth; Places on Earth
c) water occurs in different phases; and	<ul style="list-style-type: none"> • Song: Precipitation • Book: Water • Water Cycle • Water • States of Water • Heat Changes Water 	Engagement: <ul style="list-style-type: none"> • Learning Together: Our Earth
d) water flows downhill.	<ul style="list-style-type: none"> • Water Cycle 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Living Systems and Processes		
K.5 The students will investigate and understand that senses allow humans to seek, find, take in, and react or respond to different information. Key ideas include		
a) the five basic senses correspond to specific human body structures; and	<ul style="list-style-type: none"> • Song: Five Senses • Book: I Wish I Had Ears Like a Bat • Sight • Hearing • Touch • Smell • Taste 	Engagement: <ul style="list-style-type: none"> • Learning Together: The World Around Us
b) senses are used in our daily lives.	<ul style="list-style-type: none"> • Song: Five Senses • Book: I Wish I Had Ears Like a Bat • Sight • Hearing • Touch • Smell • Taste 	Engagement: <ul style="list-style-type: none"> • Learning Together: The World Around Us
K.6 The student will investigate and understand that there are differences between living organisms and nonliving objects. Key ideas include		
a) all things can be classified as living or nonliving; and	<ul style="list-style-type: none"> • Song: Living and Nonliving • Living or Nonliving 	Engagement:: <ul style="list-style-type: none"> • Learning Together: Living Things
b) living organisms have certain characteristics that distinguish them from nonliving objects.	<ul style="list-style-type: none"> • Song: Living and Nonliving • Book: Mela's Water Pot • Living or Nonliving • Sun • Water • Plants and Animals Need Air • Animals Need Water • Plants Need Water 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Water for Plants; Light for Plants Engagement: <ul style="list-style-type: none"> • Learning Together: Green and Growing

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
K.7 The student will investigate and understand that plants and animals have basic needs and life processes. Key ideas include		
a) living things need adequate food, water, shelter, air, and space to survive;	<ul style="list-style-type: none"> Song: Living and Nonliving Books: Mela's Water Pot; Everybody Needs to Eat Living or Nonliving Sun Water Plants and Animals Need Air Animals Need Water Plants Need Water Healthy Plants' Needs 	<ul style="list-style-type: none"> More-To-Explore Experiment: Water for Plants; Light for Plants <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Green and Growing
b) plants and animals have life cycles; and	<ul style="list-style-type: none"> Books: The Old Maple Tree; A Seed Grows Animal Life Cycle and Growth Plant Life Cycle and Growth 	<p>Engagement:</p> <ul style="list-style-type: none"> Life Cycle: Bird; Butterfly; Frog
c) offspring of plants and animals are similar but not identical to their parents or to one another.	<ul style="list-style-type: none"> Books: George and Jack; A Seed Grows Build Knowledge: Mine 	<ul style="list-style-type: none"> More-To-Explore Experiment: Traits
Earth and Space Systems		
K.8 The student will investigate and understand that light influences temperature on Earth's surfaces and can cause shadows. Key ideas include		
a) the sun provides light and warms Earth's surface;	<ul style="list-style-type: none"> Song: Sun Blues Sun Sun, Moon, and Earth 	<p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Astronomy: The Sky Above Us
b) shadows can be produced when sunlight or artificial light is blocked by an object; and	<ul style="list-style-type: none"> Book: My Family Campout Light Properties Properties of Light Light Experiment 	<p>Engagement:</p> <ul style="list-style-type: none"> Sun and Shade Pictures
c) objects in shadows and objects in sunlight have different temperatures.	<ul style="list-style-type: none"> Science Tools 	<ul style="list-style-type: none"> More-To-Explore Experiment: Temperatures
K.9 The student will investigate and understand that there are patterns in nature. Key patterns include		
a) daily weather;	<ul style="list-style-type: none"> Song: Precipitation Book: Whatever the Weather Weather Weather Patterns Calendar/Graph Weather Clouds 	<p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: The Weather Around Us; Astronomy; Weather

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
K.9 The student will investigate and understand that there are patterns in nature. Key patterns include		
b) seasonal changes; and	<ul style="list-style-type: none"> Song: Seasons Books: That's What I Like: A Book About Seasons; The Four Seasons Calendar/Graph Weather Spring Summer Fall Winter 	Engagement: <ul style="list-style-type: none"> Learning Together: The Weather Around Us; Astronomy; Weather
c) day and night.	<ul style="list-style-type: none"> Songs: The Moon; Sun Blues Books: Moon Song; Star Pictures; My Family Campout Sun Moon Constellations 	<ul style="list-style-type: none"> More-To-Explore Experiment: The Moon Engagement: <ul style="list-style-type: none"> Learning Together: The Sky Above Us
K.10 The student will investigate and understand that change occurs over time. Key ideas include		
a) natural and human-made things change over time;	<ul style="list-style-type: none"> Song: Rock Cycle Book: Fossils Under Our Feet Rock Cycle Fossils 	
b) living and nonliving things change over time;	<ul style="list-style-type: none"> Songs: Plants Are Growing; Rock Cycle Book: Fossils Under Our Feet Animal Life Cycle and Growth Plant Life Cycle and Growth Rock Cycle Fossils 	
c) changes can be observed and measured; and	<ul style="list-style-type: none"> Songs: Plants Are Growing; Rock Cycle Book: Fossils Under Our Feet Animal Life Cycle and Growth Plant Life Cycle and Growth Rock Cycle Fossils 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
K.10 The student will investigate and understand that change occurs over time. Key ideas include <i>continued</i>		
d) changes may be fast or slow.	<ul style="list-style-type: none"> • Songs: Plants Are Growing; Rock Cycle; Seasons • Books: Fossils Under Our Feet; That's What I Like: A Book About Seasons; The Four Seasons • Animal Life Cycle and Growth • Plant Life Cycle and Growth • Rock Cycle • Fossils • Water Cycle • Spring • Summer • Fall • Winter 	
Earth Resources		
K.11 The student will investigate and understand that humans use resources. Key ideas include		
a) some materials and objects can be used over and over again;	<ul style="list-style-type: none"> • Songs: Conservation; Pollution Rap; Inventing • Book: Inventions All Around • Natural Resources • Pollution and Recycling 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth
b) materials can be recycled; and	<ul style="list-style-type: none"> • Songs: Conservation; Pollution Rap • Natural Resources • Pollution and Recycling 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth
c) choices we make impact the air, water, land and living things.	<ul style="list-style-type: none"> • Songs: Conservation; Pollution Rap; I Am Part of All I See • Natural Resources • Pollution and Recycling • Care of Earth • Care of Water • Care of Air 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
GRADE ONE		
Scientific and Engineering Practices		
1.1 The student will demonstrate an understanding of scientific and engineering practices by		
a) asking questions and defining problems - ask questions and make predictions based on observations - identify a simple problem that can be solved through the development of a new tool or improved object	<ul style="list-style-type: none"> Songs: The Scientific Method; Inventing Book: Inventions All Around Science Investigation Observe a Simple System 	
b) planning and carrying out investigations - with guidance, conduct investigations to produce data - identify characteristics and properties of objects by observations - use tools to measure relative length, weight, volume, and temperature of common objects	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation Measurement Tools 	
c) interpreting, analyzing, and evaluating data - use and share pictures, drawings, and/or writings of observations - describe patterns and relationships - classify and arrange objects based on a single physical characteristic or property - organize and represent various forms of data using tables, picture graphs, and object graphs - read and interpret data displayed in tables, picture graphs, and object graphs, using the vocabulary more, less, fewer, greater than, less than, and equal to	<ul style="list-style-type: none"> Songs: Graphing; Tallying Books: One More Cat; The Booneville Nine Graphs Picture Graphs Bar Graphs Use Graphs and Tables Sort Weather Patterns 	

STANDARDS OF LEARNING FOR VIRGINIA PUBLIC SCHOOLS

MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.1 The student will demonstrate an understanding of scientific and engineering practices by <i>continued</i>		
d) constructing and critiquing conclusions and explanations - make simple conclusions based on data or observations - recognize unusual or unexpected results	<ul style="list-style-type: none"> Song: The Scientific Method Science Investigation 	
e) developing and using models - use physical models to demonstrate simple phenomena and natural processes	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
f) obtaining, evaluating, and communicating information - communicate observations and data using simple graphs, pictures, drawings, numbers, speech and/or writing	<ul style="list-style-type: none"> Graphs Picture Graphs Bar Graphs Use Graphs and Tables 	
Force, Motion, and Energy		
1.2 The student will investigate and understand that objects can move in different ways. Key ideas include		
a) objects may have straight, circular, spinning, and back-and-forth motions; and	<ul style="list-style-type: none"> Songs: Gravity; Sound; Push and Pull Books: Up and Down; What Sounds Say Push and Pull 	<ul style="list-style-type: none"> More-To-Explore Experiment: Air Movement
b) objects may vibrate and produce sound.	<ul style="list-style-type: none"> Song: Sound Book: What Sounds Say Sound Waves 	<ul style="list-style-type: none"> More-To-Explore Experiment: Sound
Matter		
1.3 The student will investigate and understand that objects are made from materials that can be described by their physical properties. Key ideas include		
a) objects are made of one or more materials with different physical properties and can be used for a variety of purposes;	<ul style="list-style-type: none"> Materials Density Experiment 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.3 The student will investigate and understand that objects are made from materials that can be described by their physical properties. Key ideas include <i>continued</i>		
b) when a material is changed in size most physical properties remain the same; and	<ul style="list-style-type: none"> • Matter • Changes in Matter 	
c) the type and amount of material determine how much light can pass through an object.	<ul style="list-style-type: none"> • Book: My Family Campout • Light Properties • Properties of Light • Light Experiment 	
Living Systems and Processes		
1.4 The student will investigate and understand that plants have basic life needs and functional parts that allow them to survive. Key ideas include		
a) plants need nutrients, air, water, light, and a place to grow;	<ul style="list-style-type: none"> • Song: Plants Are Growing • Books: A Seed Grows; The Old Maple Tree • Healthy Plants' Needs • Plants Need Water • Animals and Plants Need Air • Sun • Plant Experiment 	<ul style="list-style-type: none"> • More-To-Explore Experiment: Water for Plants <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Green and Growing
b) structures of plants perform specific functions; and	<ul style="list-style-type: none"> • Song: Plants Are Growing • Functions of Plant Parts • Plants 	
c) plants can be classified based on a variety of characteristics.	<ul style="list-style-type: none"> • Functions of Plant Parts • Edible Plant Parts 	
1.5 The student will investigate and understand that animals, including humans, have basic life needs that allow them to survive. Key ideas include		
a) animals need air, food, water, shelter, and space (habitat);	<ul style="list-style-type: none"> • Songs: Water; Food From Plants • Books: Mela's Water Pot; Everybody Needs to Eat • Sun • Water • Plants and Animals Need Air • Animals Need Water 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.5 The student will investigate and understand that animals, including humans, have basic life needs that allow them to survive. Key ideas include <i>continued</i>		
b) animals have different physical characteristics that perform specific functions; and	<ul style="list-style-type: none"> • Song: Animal Bodies • Books: I Wish I Had Ears Like a Bat; Fawn Eyes; Animal Bodies • Animal Teeth • Animal Bodies • Animal Tracks 	
c) animals can be classified based on a variety of characteristics.	<ul style="list-style-type: none"> • Song: Animal Bodies • Books: I Wish I Had Ears Like a Bat; Animal Bodies; Fawn Eyes • Herbivores, Carnivores, and Omnivores • What Animals Eat • Animal Teeth • Animal Bodies • Animal Tracks 	
Earth and Space Systems		
1.6 The student will investigate and understand that there is a relationship between the sun and Earth. Key ideas include		
a) the sun is the source of energy and light that warms the Earth's land, air, and water; and	<ul style="list-style-type: none"> • Song: Sun Blues • Sun • Sun, Moon, and Earth 	
b) the sun's relative position changes in the Earth's sky throughout the day.	<ul style="list-style-type: none"> • Sun • Light Exploration • Sun, Moon, and Earth 	Engagement: <ul style="list-style-type: none"> • Learning Together: The Sky Above Us
1.7 The student will investigate and understand that there are weather and seasonal changes. Key ideas include		
a) changes in temperature, light, and precipitation occur over time;	<ul style="list-style-type: none"> • Songs: Seasons; Precipitation • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Weather • Spring • Summer • Fall • Winter 	Engagement: <ul style="list-style-type: none"> • Learning Together: The Weather Around Us

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
1.7 The student will investigate and understand that there are weather and seasonal changes. Key ideas include <i>continued</i>		
b) there are relationships between daily weather and the season; and	<ul style="list-style-type: none"> Songs: Seasons; Precipitation Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather Weather Calendar/Graph Weather Spring Summer Fall Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: The Weather Around Us
c) changes in temperature, light, and precipitation affect plants and animals, including humans.	<ul style="list-style-type: none"> Songs: Seasons; Precipitation Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather Weather Affects People and Animals Food Chains Weather Spring Summer Fall Winter 	<ul style="list-style-type: none"> More-To-Explore Experiment: Light for Plants <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: The Weather Around Us
Earth Resources		
1.8 The student will investigate and understand that natural resources can be used responsibly. Key ideas include		
a) most natural resources are limited;	<ul style="list-style-type: none"> Song: Conservation Natural Resources 	
b) human actions can affect the availability of natural resources; and	<ul style="list-style-type: none"> Songs: Conservation; Pollution Rap; I Am Part of All I See Natural Resources Pollution and Recycling Care of Earth Care of Water Care of Air 	<ul style="list-style-type: none"> More-To-Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Our Earth
c) reducing, reusing, and recycling are ways to conserve natural resources.	<ul style="list-style-type: none"> Songs: Conservation; Pollution Rap Natural Resources Pollution and Recycling Care of Earth 	<ul style="list-style-type: none"> More-To-Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Our Earth

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MATHEMATICS 2023 & SCIENCE 2018

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
GRADE TWO		
Scientific and Engineering Practices		
2.1 The student will demonstrate an understanding of scientific and engineering practices by		
a) asking questions and defining problems - ask questions that can be investigated - make predictions based on observations and prior experiences - identify a simple problem that can be solved through the development of a new tool or improved object	<ul style="list-style-type: none"> Songs: The Scientific Method; Inventing Books: Inventions All Around; I Want to Be a Scientist Like: Thomas Edison; Wilbur and Orville Wright Science Investigation 	
b) planning and carrying out investigations - with guidance, plan and conduct simple investigations to produce data - use appropriate tools to measure length, weight, and temperature of common objects using U.S. Customary units - measure time intervals using proper tools	<ul style="list-style-type: none"> Songs: The Scientific Method; Clock Hands; Telling Time Science Investigation Measurement Tools Weather Tools Tell Time 	
c) interpreting, analyzing, and evaluating data - organize and represent data in pictographs and bar graphs - read and interpret data represented in pictographs and bar graphs	<ul style="list-style-type: none"> Graphs Picture Graphs Bar Graphs Use Graphs and Tables 	
d) constructing and critiquing conclusions and explanations - make simple conclusions based on data or observations - distinguish between opinion and evidence - recognize unusual or unexpected results	<ul style="list-style-type: none"> Song: The Scientific Method Books: How Did the Chicken Cross the Road?; The Booneville Nine; Bandage Bandit Science Investigation 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.1 The student will demonstrate an understanding of scientific and engineering practices by <i>continued</i>		
e) developing and using models - use models to demonstrate simple phenomena and natural processes	<ul style="list-style-type: none"> Books: How Did the Chicken Cross the Road?; Inventions All Around; Sound Simple Machines Science Investigation 	
f) obtaining, evaluating, and communicating information - communicate observations and data using simple graphs, drawings, numbers, speech, and/or writing	<ul style="list-style-type: none"> Songs: Graphing; Tallying; The Scientific Method Books: One More Cat; The Booneville Nine Graphs Picture Graphs Bar Graphs Use Graphs and Tables 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> Questions and Answers Library Book Survey Playground Survey Rock Collections Use Graphs and Tables
Force, Motion, and Energy		
2.2 The student will investigate and understand that different types of forces may cause an object's motion to change. Key ideas include		
a) forces from direct contact can cause an object to move;	<ul style="list-style-type: none"> Song: Push and Pull Book: Mr. Mario's Neighborhood Push and Pull 	Engagement: <ul style="list-style-type: none"> Learning Together: How It Works
b) some forces, including gravity and magnetism, can cause objects to move from a distance; and	<ul style="list-style-type: none"> Song: Gravity Book: Up and Down 	
c) forces have applications in our lives.	<ul style="list-style-type: none"> Songs: Push and Pull; Gravity Books: Mr. Mario's Neighborhood; Up and Down 	
Matter		
2.3 The student will investigate and understand that matter can exist in different phases. Key ideas include		
a) matter has mass and takes up space;	<ul style="list-style-type: none"> Songs: Matter; Solid or Liquid Book: Pancakes Matter Matter Solid and Liquid Solid, Liquid, Gas Changes in Matter Matter Experiment 	Engagement: <ul style="list-style-type: none"> Learning Together: Solids, Liquids, and Gases; How It Works

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.3 The student will investigate and understand that matter can exist in different phases. Key ideas include <i>continued</i>		
b) solids, liquids, and gases have different characteristics; and	<ul style="list-style-type: none"> Songs: Matter; Solid or Liquid Book: Pancakes Matter Matter Solid and Liquid Solid, Liquid, Gas Changes in Matter Matter Experiment 	Engagement: <ul style="list-style-type: none"> Learning Together: Solids, Liquids, and Gases; How It Works
c) heating and cooling can change the phases of matter.	<ul style="list-style-type: none"> Songs: Matter; Solid or Liquid Book: Pancakes Matter Matter Solid and Liquid Solid, Liquid, Gas Changes in Matter Matter Experiment 	Engagement: <ul style="list-style-type: none"> Learning Together: Solids, Liquids, and Gases; How It Works
Living Systems and Processes		
2.4 The student will investigate and understand that plants and animals undergo a series of orderly changes as they grow and develop. Key ideas include		
a) animals have life cycles; and	<ul style="list-style-type: none"> Animal Life Cycle and Growth 	
b) plants have life cycles.	<ul style="list-style-type: none"> Books: A Seed Grows; The Old Maple Tree Plant Life Cycle and Growth 	
2.5 The student will investigate and understand that living things are part of a system. Key ideas include		
a) plants and animals are interdependent with their living and nonliving surroundings;	<ul style="list-style-type: none"> Song: Food From Plants Book: Everybody Needs to Eat 	
b) an animal's habitat provides all of its basic needs; and	<ul style="list-style-type: none"> Book: Animal Bodies Deserts Oceans Mountains Rainforests 	
c) habitats change over time due to many influences.	<ul style="list-style-type: none"> Books: Turtle's Pond; The Old Maple Tree; Winter Snoozers 	

VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Earth and Space Systems		
2.6 The student will investigate and understand that there are different types of weather on Earth. Key ideas include		
a) different types of weather have specific characteristics;	<ul style="list-style-type: none"> • Songs: Seasons; Precipitation; Storms • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Weather • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Weather Around Us
b) measuring, recording, and interpreting weather data allows for identification of weather patterns; and	<ul style="list-style-type: none"> • Songs: Seasons; Precipitation • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Weather Patterns • Calendar/Graph Weather • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Weather Around Us
c) tracking weather allows us to prepare for the weather and storms.	<ul style="list-style-type: none"> • Songs: Seasons; Precipitation; Storms • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Lightning Safety • Weather • Weather Patterns • Calendar/Graph Weather • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Weather Around Us

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VIRGINIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
2.7 The student will investigate and understand that weather patterns and seasonal changes affect plants, animals, and their surroundings. Key ideas include		
a) weather and seasonal changes affect the growth and behavior of living things;	<ul style="list-style-type: none"> Song: Seasons Books: Whatever the Weather; That's What I Like: A Book About Seasons; The Four Seasons; Winter Snoozers Weather Affects People and Animals 	
b) wind and weather can change the land; and	<ul style="list-style-type: none"> Rock Cycle 	
c) changes can happen quickly or slowly over time.	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> More-To-Explore Experiment: Rocks
Earth Resources		
2.8 The student will investigate and understand that plants are important natural resources. Key ideas include		
a) the availability of plant products affects the development of a geographic area;	<ul style="list-style-type: none"> Song: Food From Plants Books: Everybody Needs To Eat Food From Plants Animals Need Water Plants Need Water Animals and Plants Need Air Sun Natural Resources 	<ul style="list-style-type: none"> More-To-Explore Experiment: Water for Plants <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Green and Growing
b) plants provide oxygen, homes, and food for many animals; and	<ul style="list-style-type: none"> Song: Food From Plants Books: Everybody Needs To Eat; Great White Bird Food From Plants Deserts 	
c) plants can help reduce the impact of wind and water.	<ul style="list-style-type: none"> Natural Resources 	<p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: Our Earth

PRE-MATH & SCIENCE

Math Books

Zero In My Toybox; 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; Zero Is a Big Round Hole; 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.

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

Many of these songs are available on the [Waterford.org YouTube channel](https://www.youtube.com/channel/UC8v33333333333333333333).