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Curriculum
Correlation April 2025

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Correlation

Waterford Early Learning: Math & Science

Virginia Standards of Learning | Mathematics 2023 | Science 2018 for Kindergarten, 1st, and 2nd Grades

**Correlation content includes a sampling of Waterford Digital Activities and Resources*

Overview

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This document provides a detailed correlation of Waterford Early Learning to Virginia Standards of Learning Mathematics 2023 & Science 2018.

Correlation Description

This document aligns Virginia Standards of Learning Mathematics 2023 & Science 2018. to Waterford.org's digital activities and supporting resources.

Waterford Digital Activities

Waterford programs include engaging, evidence-based digital activities anchored in the science of learning that progress through an adaptive learning path in reading, math, and science. These activities are also available for collaborative instruction at →teacher.waterford.org.

- **Classroom Playlists** enable teachers to harness learning technologies in whole-class instruction, flexible small groups, and personalized support for individual students.

Waterford Resources

Waterford provides an engaging, diverse collection of PDF resources tailored to boost children's learning experiences, empowering instruction in both classroom and home settings.

- **Teacher Resources** encompass class activities, reference materials, teacher guides, an array of books, and more.
- **Family Resources** encompass newsletters, activity sets, and reference materials, all available in both English and Spanish.

Waterford Curriculum Details

Waterford programs leverage the science of learning and evidence-based research to optimize reading development, accelerate learning, and target interventions for PreK–2nd grade learners.

Adaptive, Individualized Learning

Tailored instruction enables students to progress through the sequence at their own pace, offering multiple opportunities for practice as needed and more challenging activities when students are ready. This adaptation is automatic within the learning sequence. More information on the adaptive learning sequence can be found in →Waterford's Adaptive Learning Path in Action video.

Data-Informed Instruction

Administrators and teachers can use the program's reporting features to monitor progress in real-time, identify areas of difficulty, and utilize additional intervention tools in varied instructional settings. Examples of the reporting features can be found →here.

Research-Driven Development

Waterford is committed to ongoing development based on the latest research findings. Please note that this correlation is accurate as of the date on the cover.

Reading Sequence

Waterford's Reading Sequence is aligned to the Science of Reading, with explicit and systematic instruction. The sequence develops phonics; phonological awareness; comprehension and vocabulary; language concepts and writing; and fluency. More detailed information can be found in the →Reading Skills Scope & Sequence.

Math and Science Sequence

Waterford's Math and Science Sequence is designed around clear instructional principles. The math sequence develops numbers and operations (including counting and cardinality); operations and algebraic thinking; measurement and data; and geometry. The science sequence develops an understanding of physical, life, earth and space domains. More detailed information can be found in the →Math and Science Scope & Sequence.

SmartStart Sequence

Waterford's SmartStart Sequence is designed so learners are exposed to the foundational principles critical to kindergarten readiness. SmartStart combines the digital learning path with teacher resources to teach early reading, math, science, and social studies concepts as well as executive function, creative arts, health, and physical development. More detailed information can be found in the →SmartStart Scope & Sequence.

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Virginia Standards	Waterford Digital Activities	Waterford Resources
Mathematics		
Kindergarten		
Number and Number Sense		
K.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 100.		
K.NS.1a 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.	• Make and Count Groups • Number Counting • Number Instruction • One-to-One Correspondence ***Classroom Playlists*** • VA: K: Number and Number Sense: Identify and Represent Number: • VA: K: Number and Number Sense: Make and Count Groups:	• Object Counting Basics • Object Counting Grouping
K.NS.1b Recognize and explain that the number of objects remains the same regardless of the arrangement or the order in which the objects are counted.	• Make and Count Groups • Number Counting • Number Instruction • One-to-One Correspondence ***Classroom Playlists*** • VA: K: Number and Number Sense: Identify and Represent Number: • VA: K: Number and Number Sense: Make and Count Groups:	• Object Counting Grouping
K.NS.1c Represent forward counting by ones using a variety of tools, including five-frames, ten frames, and number paths (a prelude to number lines	• Number Counting • Number Instruction ***Classroom Playlists*** • VA: K: Number and Number Sense: Count Forward	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 100 *continued*		
K.NS.1d Count forward orally by ones from 0 to 100.	• Number Songs • Counting Songs • (See titles at end of document. • Number Counting • Number Instruction ***Classroom Playlists*** • VA: K: Number and Number Sense: Count to 100	• Count to 100 by Ones and Tens
K.NS.1e Count forward orally by ones, within 100, starting at any given number.	• Songs: Counting On • Count On ***Classroom Playlists*** • VA: K: Number and Number Sense: Count Forward	• Count Forward
K.NS.1f Count backward orally by ones when given any number between 1 and 20.	• Songs: Counting Backward • Books: A Space Adventure • Counting Back • Count Down ***Classroom Playlists*** • VA: K: Number and Number Sense: Count Backward	
K.NS.1g State the number after, without counting, when given any number between 0 and 30.	• Counting Songs • (See titles at end of document. • Order Numbers • Number Instruction • Number Chart ***Classroom Playlists*** • VA: K: Number and Number Sense: Count Forward	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 100 *continued*		
K.NS.1h State the number before, without counting, when given any number between 1 and 20.	• Counting Songs • (See titles at end of document. • Order Numbers • Number Instruction • Number Chart ***Classroom Playlists*** • VA: K: Number and Number Sense: Count Backward	
K.NS.1i Use objects, drawings, words, or numbers to compose and decompose numbers 11-19 into a ten and some ones.	• Place Value • Number Instruction • Compose ***Classroom Playlists*** • VA: K: Number and Number Sense: Compose and Decompose Numbers 11-19	• Tens and ones
K.NS.1j 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.	• Songs: Skip Counting • Skip Count • Make and Count Groups • Place Value • Compose ***Classroom Playlists*** • VA: K: Number and Number Sense: Place Value: • VA: K: Number and Number Sense: Compose and Decompose Numbers 11-19	
K.NS.2 The student will identify, represent, and compare quantities up to 30.		
K.NS.2a Read, write, and identify the numerals 0 through 30.	• Songs: Count to 31 • Number Counting • Number Instruction ***Classroom Playlists*** • VA: K: Number and Number Sense: Identify and Represent Number:	• Write Numbers 0-20

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.NS.2 The student will identify, represent, and compare quantities up to 30 *continued*.		
K.NS.2b Construct a set of objects that corresponds to a given numeral within 30, including an empty set.	• Songs: Zero Is a Big Round Hole • Make and Count Groups • Number Instruction • One-to-One Correspondence ***Classroom Playlists*** • VA: K: Number and Number Sense: Identify and Represent Number:	
K.NS.2c 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.	• Songs: Count to 31 • Make and Count Groups • Number Instruction • One-to-One Correspondence ***Classroom Playlists*** • VA: K: Number and Number Sense: Identify and Represent Number:	• Write Numbers 0-20
K.NS.2d 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.	• Songs: Greater Than, Less Than • Books: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make and Count Groups ***Classroom Playlists*** • VA: K: Number and Number Sense: More Than • VA: K: Number and Number Sense: Fewer Than • VA: K: Number and Number Sense: Greater Than, Less Than • VA: K: Number and Number Sense: More Than, Fewer Than	• Greater, less, or equal

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.NS.2 The student will identify, represent, and compare quantities up to 30 *continued*.		
K.NS.2e Given a numeral up to 30, construct a set which has more, fewer, or the same number of objects using concrete or pictorial models.	• Songs: Greater Than, Less Than • Books: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than ***Classroom Playlists*** • VA: K: Number and Number Sense: More Than • VA: K: Number and Number Sense: Fewer Than • VA: K: Number and Number Sense: Greater Than, Less Than • VA: K: Number and Number Sense: More Than, Fewer Than	• Greater, less, or equal
K.NS.2f Compare two sets containing up to 30 concrete objects or pictorial models, using the terms more, fewer, or the same as (equal to .	• Songs: Greater Than, Less Than • Books: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make and Count Groups ***Classroom Playlists*** • VA: K: Number and Number Sense: Greater Than, Less Than	• Greater, less, or equal
K.NS.2g 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 .	• Songs: Greater Than, Less Than • Books: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make and Count Groups ***Classroom Playlists*** • VA: K: Number and Number Sense: More Than • VA: K: Number and Number Sense: Fewer Than • VA: K: Number and Number Sense: Greater Than, Less Than • VA: K: Number and Number Sense: More Than, Fewer Than	• Compare Two Numbers

Virginia Standards	Waterford Digital Activities	Waterford Resources
Number and Number Sense		
K.CE.1 The student will model and solve single-step contextual problems using addition and subtraction with whole numbers within 10.		
K.CE.1a Use objects, drawings, words, or numbers to compose and decompose numbers less than or equal to 5 in multiple ways.	• Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction ***Classroom Playlists*** • VA: K: Number and Number Sense: Add to 5	• How Many?
K.CE.1b Recognize and describe with fluency part-part-whole relationships for numbers up to 5 in a variety of configurations.	• Make and Count Groups ***Classroom Playlists*** • VA: K: Number and Number Sense: Add to 5	• How Many?
K.CE.1c Model and identify the number that makes 5 when added to a given number less than or equal to 5.	• Make and Count Groups • Add Groups • Act Out Addition ***Classroom Playlists*** • VA: K: Number and Number Sense: Add to 5	• How Many?
K.CE.1d Use objects, drawings, words, or numbers to compose and decompose numbers less than or equal to 10 in multiple ways.	• Make 10 • Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction ***Classroom Playlists*** • VA: K: Number and Number Sense: Addition • VA: K: Number and Number Sense: Subtraction	• Decompose Numbers

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.CE.1 The student will model and solve single-step contextual problems using addition and subtraction with whole numbers within 10 *continued*.		
K.CE.1e Model and identify the number that makes 10 when added to a given number less than or equal to 10.	• Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction ***Classroom Playlists*** • VA: K: Number and Number Sense: Addition • VA: K: Number and Number Sense: Subtraction	• Numbers that Make 10
K.CE.1f Model and solve single-step contextual problems (join, separate, and part-part-whole using 10 or fewer concrete objects.	• Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Books: Five Delicious Muffins • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction ***Classroom Playlists*** • VA: K: Number and Number Sense: Addition • VA: K: Number and Number Sense: Subtraction	• Addition and Subtraction Word Problems
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.		
K.MG.1a Use direct comparisons to compare, describe, and justify the: **K.MG.1ai** lengths of two objects using the terms longer or shorter;	• Songs: Measuring Plants • Length ***Classroom Playlists*** • VA: K: Measurement and Geometry: Length	• Comparing Objects

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
K.MG.1aii heights of two objects using the terms taller or shorter;	• Big and Little • Tall and Short ***Classroom Playlists*** • VA: K: Measurement and Geometry: Height	• Comparing Objects
K.MG.1aiii weights of two objects using the terms heavier or lighter;	• Big and Little • Heavy and Light ***Classroom Playlists*** • VA: K: Measurement and Geometry: Weight	• Comparing Objects
K.MG.1aiv volumes of two containers using the terms more or less; and	• Capacity ***Classroom Playlists*** • VA: K: Measurement and Geometry: Capacity	• Comparing Objects
K.MG.1av amount of time spent on two events using the terms longer or shorter.	• Books: 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,m squares, and rectangles).		
K.MG.2a Identify and name concrete and pictorial representations of circles, triangles, squares, and rectangles regardless of their orientation in space.	• 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 ***Classroom Playlists*** • VA: K: Measurement and Geometry: Shapes	• Shape Recognition

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.MG.2 The student will identify, describe, name, compare, and construct plane figures (circles, triangles,m squares, and rectangles) *continued*.		
K.MG.2b Describe triangles, squares, and rectangles to include the number of sides and number of vertices.	• 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 ***Classroom Playlists*** • VA: K: Measurement and Geometry: Shapes	• Compare Shapes
K.MG.2c Describe a circle using terms such as round and curved.	• Songs: Marmot Shapes; Shapes, Shapes, Shapes • Circle, Square, Triangle, Rectangle • Simple Shapes ***Classroom Playlists*** • VA: K: Measurement and Geometry: Shapes	
K.MG.2d Distinguish between examples and nonexamples of identified plane figures (circles, triangles, squares, and rectangles.	• Songs: Marmot Shapes; Shapes, Shapes, Shapes • Circle, Square, Triangle, Rectangle • Simple Shapes ***Classroom Playlists*** • VA: K: Measurement and Geometry: Shapes	
K.MG.2e Compare and contrast two plane figures using characteristics to describe similarities and differences.	• Songs: Corners and Sides • Simple Shapes • Congruence • Similar Figures	• Compare Shapes
K.MG.2f Construct plane figures (circles, triangles, squares, and rectangles using a variety of materials (e.g., straws, sticks, pipe cleaners .	• Geoboard ***Classroom Playlists*** • VA: K: Measurement and Geometry: Build Shapes	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.MG.3 The student will describe the units of time represented in a calendar.		
K.MG.3a Identify a calendar as a tool used to measure time.	• Songs: Days in a Month; Months of the Year • Calendar ***Classroom Playlists*** • VA: K: Measurement and Geometry: Calendar	• Calendar Template
K.MG.3b Name the days of the week and state that there are seven days in one week.	• Songs: Days of the Week	
K.MG.3c Determine the day before and after a given day (e.g., yesterday, today, tomorrow.	• Today • Yesterday/Tomorrow ***Classroom Playlists*** • VA: K: Measurement and Geometry: Calendar	
K.MG.3d Name the twelve months of the year and state that there are twelve months in one year.	• Songs: Months of the Year	
K.MG.3e Distinguish between days of the week and months of the year.	• Songs: Days of the Week; Days in a Month; Months of the Year • Calendar ***Classroom Playlists*** • VA: K: Measurement and Geometry: Calendar	

Virginia Standards	Waterford Digital Activities	Waterford Resources
Probability and Statistics		
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.		
K.PS.1a Sort and classify concrete objects into appropriate subsets (categories based on one attribute (e.g., size, shape, color, thickness.	• Songs: All Sorts of Laundry • Books: Buttons, Buttons • Sort ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Sorting	• Classifying Objects
K.PS.1b Describe and label attributes (e.g., size, color, shape of a set of objects (e.g., coins, counters, buttons that has been sorted.	• Songs: All Sorts of Laundry • Books: Buttons, Buttons • Sort ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Sorting	• Measurable Attributes
K.PS.1c 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.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Picture Graphs	• Data Categorization
K.PS.1d Determine the data needed to answer a posed question, and collect the data using various methods (e.g., counting objects, drawing pictures.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Picture Graphs ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Tally Marks • VA: K: Probabilty and Statistics: Picture Graphs	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
K.PS.1e Organize and represent a data set (vertically or horizontally by sorting concrete objects into organized groups to form a simple object graph.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Picture Graphs ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Tally Marks • VA: K: Probabilty and Statistics: Picture Graphs	• Data Categorization
K.PS.1f Organize and represent a data set (vertically or horizontally using pictures to form a simple picture graph.	• Songs: Tallying; Graphing • Books: One More Cat • Picture Graphs ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Picture Graphs	• Data Categorization
K.PS.1g Analyze data represented in object graphs and picture graphs and communicate results: **K.PS.1gi** 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	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Picture Graphs ***Classroom Playlists*** • VA: K: Probabilty and Statistics: Tally Marks • VA: K: Probabilty and Statistics: Picture Graphs	• Data Categorization
K.PS.1gii draw conclusions about the data and make predictions based on the data.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Picture Graphs	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford Resources
Patterns, Functions, and Algebra		
K.PFA.1 The student will identify, describe, extend, and create simple repeating patterns using various representations.		
K.PFA.1a Identify and describe the core found in repeating patterns.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	
K.PFA.1b Extend a repeating pattern by adding at least two complete repetitions of the core to the pattern.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	
K.PFA.1c Create and describe a repeating pattern using objects, colors, sounds, movements, or pictures.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	

Virginia Standards	Waterford Digital Activities	Waterford 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.		
1.NS.1a Count forward orally by ones from 0 to 120 starting at any number between 0 and 120.	• Songs: Counting On • Count On • Number Chart ***Classroom Playlists*** • VA: 1: Number and Number Sense: Counting to 120	• Count to 120
1.NS.1b Count backward orally by ones when given any number between 1 and 30.	• Songs: Counting Backward • Books: A Space Adventure • Counting Back • Count Down ***Classroom Playlists*** • VA: 1: Number and Number Sense: Counting Backwards	
1.NS.1c 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.	• Songs: Skip Counting • Skip Count • Make and Count Groups • Place Value • Number Chart ***Classroom Playlists*** • VA: 1: Number and Number Sense: Skip Counting	
1.NS.1d 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.	• Songs: Skip Counting • Skip Count • Number Chart ***Classroom Playlists*** • VA: 1: Number and Number Sense: Skip Counting	

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 120 *continued*.		
1.NS.1e 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.	• Make and Count Groups • Number Chart • Place Value ***Classroom Playlists*** • VA: 1: Number and Number Sense: Place Value	
1.NS.1f Identify a penny, nickel, and dime by their attributes and describe the number of pennies equivalent to a nickel and a dime.	• Songs: Save Your Pennies; Money • Coin Identification • Coin Value • Count Dimes, Nickels, and Pennies ***Classroom Playlists*** • VA: 1: Number and Number Sense: Coin Identification • VA: 1: Number and Number Sense: Coin Value	• Coin Identification
1.NS.1g 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.	• Songs: Skip Counting; Save Your Pennies; Money • Skip Counting • Coin Identification • Coin Value • Count Dimes, Nickels, and Pennies ***Classroom Playlists*** • VA: 1: Number and Number Sense: Skip Counting	
1.NS.2 The student will represent, compare, and order quantities up to 120.		
1.NS.2a Read and write numerals 0-120 in sequence and out of sequence.	• Songs: Counting On • Order Numbers • Number Chart • Number Recognition and Sense ***Classroom Playlists*** • VA: 1: Number and Number Sense: Read and Write Numbers	• Count to 120

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.NS.2 The student will represent, compare, and order quantities up to 120 *continued*.		
1.NS.2b Estimate the number of objects (up to 120 in a given collection and justify the reasonableness of an answer.	• Songs: At the Market • Logic Games	
1.NS.2c 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.	• Songs: Place Value • Place Value ***Classroom Playlists*** • VA: 1: Number and Number Sense: Place Value	• Tens as a Bundle of Ones
1.NS.2d Describe the number of groups of tens and ones when given a two-digit number and justify reasoning.	• Songs: Place Value • Place Value of 2-digit Numbers • Add with Manipulatives ***Classroom Playlists*** • VA: 1: Number and Number Sense: Place Value	• Tens as a Bundle of Ones
1.NS.2e Compare two numbers between 0 and 120 represented pictorially or with concrete objects using the terms greater than, less than, or equal to.;	• Songs: Greater Than, Less Than • Books: For the Birds • Greater Than, Less Than • More Than • Fewer Than • Place Value ***Classroom Playlists*** • VA: 1: Number and Number Sense: Compare Numbers: Greater Than, Less Than • VA: 1: Number and Number Sense: Compare Numbers: More Than • VA: 1: Number and Number Sense: Compare Numbers: Fewer Than	• Compare Two-digit Numbers

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.NS.2 The student will represent, compare, and order quantities up to 120 *continued.*		
1.NS.2f Order three sets, each set containing up to 120 objects, from least to greatest, and greatest to least.	• Songs: Greater Than, Less Than; Large, Larger, Largest • Books: For the Birds • Order Numbers • Greater Than, Less Than • More Than • Fewer Than • Place Value ***Classroom Playlists*** • VA: 1: Number and Number Sense: Compare Numbers: Greater Than, Less Than • VA: 1: Number and Number Sense: Compare Numbers: More Than • VA: 1: Number and Number Sense: Compare Numbers: Fewer Than	
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.		
1.NS.3a Represent equal shares of a whole with two or four sharers, when given a contextual problem.	• Songs: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins • Equal-part Fractions • Label Parts of Fractions ***Classroom Playlists*** • VA: 1: Number and Number Sense: Equal Shares	• Equal Shares
1.NS.3b 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.	• Songs: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins • Equal-part Fractions • Label Parts of Fractions ***Classroom Playlists*** • VA: 1: Number and Number Sense: Label Fractions	• Equal Shares

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
1.NS.3c Describe and justify how shares are equal pieces or equal parts of the whole (limited to halves, fourths when given a contextual problem.	• Songs: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me; The Fraction Twins • Equal-part Fractions • Label Parts of Fractions ***Classroom Playlists*** • VA: 1: Number and Number Sense: Equal Shares	• Equal Shares
Computation and Estimation		
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.		
1.CE.1a Recognize and describe with fluency part-part-whole relationships for numbers up to 10 in a variety of configurations.	• Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Books: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends • Sums • Make 10 • Act Out Addition • Act Out Subtraction • Mental Math ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition	• Numbers that Make 10

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued.*		
1.CE.1b 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.	• Songs: Bee Happy Addition; 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 • Mental Math • Speed Games ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition	• Add and Subtract within 20
1.CE.1c Recall with automaticity addition and subtraction facts within 10.	• Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Minuends • Sums • Mental Math • Speed Games ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition	• Add and Subtract within 20

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued.*		
1.CE.1d 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 .	• Songs: Fact Families; Doubles • Books: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition • VA: 1: Computation and Estimation: Addition and Subtraction Families	• Add and Subtract within 20
1.CE.1e 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 .	• 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 • Compose ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition • VA: 1: Computation and Estimation: Addition and Subtraction Families	• Add and Subtract within 20

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued.*		
1.CE.1f 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.	• 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 ***Classroom Playlists*** • VA: 1: Computation and Estimation: Subtraction • VA: 1: Computation and Estimation: Addition	• Add and Subtract within 20
1.CE.1g Determine the unknown whole number that will result in a sum or difference of 10 or 20 (e.g., 14 - __ = 10 or 15 + __ = 20 .	• 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 ***Classroom Playlists*** • VA: 1: Computation and Estimation: Unknown Whole Number	• Add and Subtract within 20
1.CE.1h Identify and use (+ as a symbol for addition and (- as a symbol for subtraction.	• Songs: Subtract Those Cars; Bakery Subtraction • Add Groups to 5 • Minuends to 5 • Addition Sentences • Subtraction Sentences	

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued.*		
1.CE.1i 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 .	• Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences	• Equal sign
1.CE.1j Use concrete materials to model, identify, and justify when two expressions are not equal (e.g., 10 - 3 is not equal to 3 + 5 .	• Songs: Place Value • Place Value	• Equal sign
1.CE.1k Use concrete materials to model an equation that represents the relationship of two expressions of equal value.	• Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences	• Equal sign
1.CE.1l Write an equation that could be used to represent the solution to an oral, written, or picture problem.		• Represent Addition and Subtraction with Objects
Measurement and Geometry		
1.MG.1 The student will reason mathematically using nonstandard units to measure and compare objects by length, weight, and volume.		
1.MG.1a Use nonstandard units to measure the: **1.MG.1ai** 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;	• Books: Little Monkey • Length • Nonstandard Units of Length ***Classroom Playlists*** • VA: Measurement and Geometry: Measurement Tools • VA: Measurement and Geometry: Length • VA: Measurement and Geometry: Nonstandard	• Length Measurement

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.MG.1 The student will reason mathematically using nonstandard units to measure and compare objects by length, weight, and volume *continued*.		
1.MG.1aii 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	• Measurement Tools • Weight ***Classroom Playlists*** • VA: Measurement and Geometry: Weight	• Comparing Objects
1.MG.1aiii volumes of two containers and compare the measurements using the terms more, less, or the same as. **2.MG.1aiii** identifying different types of measuring cups as instruments to measure liquid volume.	• Measurement Tools • Capacity ***Classroom Playlists*** • VA: Measurement and Geometry: Capacity • VA: Measurement and Geometry: Capacity: Liters • VA: Measurement and Geometry: Capacity: Quarts and Pints	• Comparing Objects
1.MG.1b Measure the length, weight, or volume of the same object or container with two different units and describe how and why the measurements differ.	• Measurement Tools	• Comparing Objects
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.		
1.MG.2a Describe triangles, squares, and rectangles using the terms sides, vertices, and angles. Describe a circle using terms such as round and curved.	• Songs: Marmot Shapes; Corners and Sides • Books: The Shape of Things • Circle, Square, Triangle, Rectangle • Simple Shapes ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Defining Attributes	• Two-dimensional Shapes.

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
1.MG.2b Sort plane figures based on their characteristics (e.g., number of sides, vertices, angles, curved.	• Songs: Shapes, Shapes, Shapes; Corners and Sides • Books: The Shape of Things • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Simple Shapes • Sort ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Sorting	• Attributes • Sorting Shapes
1.MG.2c Draw and name the plane figure (circle, square, rectangle, triangle when given information about the number of sides, vertices, and angles.	• Songs: Shapes, Shapes, Shapes; Marmot Shapes; Corners and Sides • Books: The Shape of Things • Circle, Square, Triangle, Rectangle • Simple Shapes	
1.MG.2d Identify, name, and describe representations of circles, squares, rectangles, and triangles, regardless of orientation, in different environments and explain reasoning.	• Songs: Shapes, Shapes, Shapes; Marmot Shapes; Corners and Sides • Books: The Shape of Things • Circle, Square, Triangle, Rectangle • Simple Shapes ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Shapes	• Shape Recognition
1.MG.2e Recognize and name the angles found in rectangles and squares as right angles.		
1.MG.2f Compose larger plane figures by combining two or three simple plane figures (triangles, squares, and/or rectangles.	• Geoboard • Tangrams	• Form Larger Shapes

Virginia Standards	Waterford Digital Activities	Waterford Resources
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.		
1.MG.3a Identify different tools to measure time including clocks (analog and digital and calendar.	• 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	• Hours and half-hours
1.MG.3b Describe the units of time represented on a clock as minutes and hours.	• Songs: Clock Hands; Telling Time • Tell Time • Compare Minutes to Hours ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Compare Minutes to Hours	
1.MG.3c Tell time to the hour and half-hour, using analog and digital clocks.	• Songs: Clock Hands; Telling Time • Books: Mr. Romano's Secret: A Time Story • Tell Time to the Hour • Tell Time to the Half-Hour ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Tell Time • VA: 1: Measurement and Geometry: Tell Time to the Hour • VA: 1: Measurement and Geometry: Tell Time to the Half Hour	• Hours and half-hours
1.MG.3d Describe the location of the hour hand relative to time to the hour and half-hour on an analog clock.	• Songs: Clock Hands; Telling Time • Tell Time to the Hour • Tell Time to the Half-Hour ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Tell Time • VA: 1: Measurement and Geometry: Tell Time to the Hour • VA: 1: Measurement and Geometry: Tell Time to the Half Hour	• Hours and half-hours

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *contined.*		
1.MG.3e Describe the location of the minute hand relative to time to the hour and half-hour on an analog clock.	• Songs: Clock Hands; Telling Time • Tell Time to the Hour • Tell Time to the Half-Hour • Tell Time to the Minute ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Tell Time • VA: 1: Measurement and Geometry: Tell Time to the Hour • VA: 1: Measurement and Geometry: Tell Time to the Half Hour	
1.MG.3f Match the time shown on a digital clock to an analog clock to the hour and half-hour.	• Tell Time to the Hour • Tell Time to the Half-Hour ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Tell Time • VA: 1: Measurement and Geometry: Tell Time to the Hour • VA: 1: Measurement and Geometry: Tell Time to the Half Hour	
1.MG.3g Identify specific days/dates on a calendar (e.g., What date is Saturday? How many Fridays are in October?.	• Calendar • Calendar/Graph Weather • Today ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Calendar	
1.MG.3h 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?	• Songs: Ordinals • Books: The Circus Came to Town • Calendar • Ordinal Numbers ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Ordinal Numbers	• Ordinal Flashcards 1-10
1.MG.3i 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?.	• Today • Yesterday/Tomorrow • Calendar ***Classroom Playlists*** • VA: 1: Measurement and Geometry: Calendar	

Virginia Standards	Waterford Digital Activities	Waterford Resources
Probability and Statistics		
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.		
1.PS.1a 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.	• Songs: Same and Different; All Sorts of Laundry • Books: Buttons, Buttons • Sort • Length • Big and Little • Tall and Short • Heavy and Light ***Classroom Playlists*** • VA: 1: Probability and Statistics: Sorting	• Classifying Objects
1.PS.1b Describe and label attributes of a set of objects that has been sorted.	• Songs: Same and Different; All Sorts of Laundry; Adjectives Describe • Books: Buttons, Buttons • Sort • Length • Big and Little • Tall and Short • Heavy and Light ***Classroom Playlists*** • VA: 1: Probability and Statistics: Big and Little • VA: 1: Probability and Statistics: Tall and Short • VA: 1: Probability and Statistics: Heavy and Light	• Data Categorization • Sorting Attributes
1.PS.1c 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.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Graphs • Make a Table	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***continued.***		
1.PS.1d Determine the data needed to answer a posed question and collect the data using various methods (e.g., counting objects, drawing pictures, tallying.	• Songs: Tallying; Graphing • Books: Painting by Number; One More Cat • Tally Marks • Bar Graphs • Picture Graphs • Graphs • Make a Table ***Classroom Playlists*** • VA: Probability and Statistics: Bar Graphs • VA: Probability and Statistics: Picture Graphs • VA: 1: Probability and Statistics: Graphs • VA: Probability and Statistics: Tally Marks	• Data Categorization
1.PS.1e Organize and represent a data set by sorting the collected data using various methods (e.g., tallying, T-charts.	• Songs: Tallying; Graphing • Books: One More Cat • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table • Use Graphs and Tables ***Classroom Playlists*** • VA: Probability and Statistics: Bar Graphs • VA: Probability and Statistics: Picture Graphs • VA: 1: Probability and Statistics: Graphs • VA: Probability and Statistics: Tally Marks	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***continued.***		
1.PS.1f Represent a data set (vertically or horizontally using object graphs, picture graphs, and tables.	• Songs: Tallying; Graphing • Books: One More Cat • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table ***Classroom Playlists*** • VA: Probability and Statistics: Bar Graphs • VA: Probability and Statistics: Picture Graphs • VA: 1: Probability and Statistics: Graphs • VA: Probability and Statistics: Tally Marks	• Data Categorization.
1.PS.1g Analyze data represented in object graphs, picture graphs, and tables and communicate results: **1.PS.1gi** 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	• Songs: Tallying; Graphing • Books: One More Cat • Bar Graphs • Picture Graphs • Tally Marks • Graphs • Make a Table	• Data Categorization
1.PS.1gii draw conclusions about the data and make predictions based on the data.	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Graphs • Make a Table • Use Graphs and Tables	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford 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.		
1.PFA.1a Identify and describe repeating and increasing patterns.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	
1.PFA.1b Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, colors, movements, pictures, or geometric figures.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	
1.PFA.1c Create a repeating or increasing pattern using objects, pictures, movements, colors, or geometric figures.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	
1.PFA.1d Transfer a repeating or increasing pattern from one form to another.	• Songs: Train Station Patterns • Patterns • Pattern: AB; ABB; ABC ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: AB Pattern • VA: Patterns, Functions, and Algebra: ABB Pattern • VA: Patterns, Functions, and Algebra: ABC Pattern	

Virginia Standards	Waterford Digital Activities	Waterford Resources
Grade 2		
Number and Number Sense		
2.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 200.		
2.NS.1a 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.	• Songs: Skip Counting; Counting On • Skip Count by 2 • Number Patterns • Number Chart • Number Line ***Classroom Playlists*** • VA: 2: Number and Number Sense: Skip Count by 2	
2.NS.1b 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.	• Songs: Skip Counting; Counting On • Skip Count by 5 • Skip Count by 10 • Number Patterns • Number Chart • Number Line ***Classroom Playlists*** • VA: 2: Number and Number Sense: Skip Count by 5 • VA: 2: Number and Number Sense: Skip Count by 10 • VA: 2: Number and Number Sense: Number Patterns	
2.NS.1c 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.	• Songs: Skip Counting • Skip Count by • Number Patterns • Number Chart • Sequences of 2-digit Numbers • Sequences of 3-digit Numbers ***Classroom Playlists*** • VA: 2: Number and Number Sense: Skip Count by 2 • VA: 2: Number and Number Sense: Skip Count by 5 • VA: 2: Number and Number Sense: Skip Count by 10	

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 200 *continued.*		
2.NS.1d 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.	• 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Number Patterns 2-digit • VA: 2: Number and Number Sense: Number Patterns 3-digit	
2.NS.1e 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.	• Songs: Counting Backward • Books: A Space Adventure • Counting Back • Count Down • Number Line • Number Chart • Number Patterns ***Classroom Playlists*** • VA: 2: Number and Number Sense: Number Patterns 2-digit • VA: 2: Number and Number Sense: Number Patterns 3-digit	
2.NS.1f Describe and use patterns in skip counting backwards by 10s (from at least 200 to justify the next number in the counting sequence.	• Counting Back • Count Down • Number Line • Number Chart • Number Patterns	
2.NS.1g 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?.	• Songs: At the Market • Logic Games	

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 200 *continued.*		
2.NS.1h Represent even numbers (up to 50 with concrete objects, using two equal groups or two equal addends.	• Songs: Odd Todd and Even Steven • Make and Count Groups	• Odd and Even Recognition
2.NS.1i Represent odd numbers (up to 50 with concrete objects, using two equal groups with one leftover or two equal addends plus 1.	• Songs: Odd Todd and Even Steven • Make and Count Groups • Doubles Plus 1	• Odd and Even Recognition
2.NS.1j 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.	• Songs: Odd Todd and Even Steven • Books: Buttons, Buttons • Make and Count Groups	• Odd and Even Recognition
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.		
2.NS.2a Write the three-digit whole number represented by a given model (e.g., concrete objects, pictures of base 10 blocks.	• Songs: Place Value • Place Value • Number Chart ***Classroom Playlists*** • VA: 2: Number and Number Sense: Place Value	• Place Value: Hundreds, Tens & Ones 1 • Place Value: Hundreds, Tens & Ones 2
2.NS.2b Read, write, and represent three-digit numbers in standard form, expanded form, and word form, using concrete or pictorial representations.	• Expanded Notation • Place Value of 3-digit Numbers ***Classroom Playlists*** • VA: 2: Number and Number Sense: Place Value • VA: 2: Number and Number Sense: Expanded Notation	• Read And Write Numbers to 1000

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued.*		
2.NS.2c 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.	• Songs: Place Value • Number Patterns • Number Chart • Number Line • Place Value • Patterns of 3-digit Numbers • Sequences of 3-digit Numbers ***Classroom Playlists*** • VA: 2: Number and Number Sense: Place Value • VA: 2: Number and Number Sense: Expanded Notation	
2.NS.2d Investigate and explain the ten-to-one relationships among ones, tens, and hundreds, using models.	• Songs: Place Value • Number Patterns • Number Chart • Place Value • Patterns of 3-digit Numbers • Sequences of 3-digit Numbers ***Classroom Playlists*** • VA: 2: Number and Number Sense: Place Value • VA: 2: Number and Number Sense: Expanded Notation	
2.NS.2e 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.	• Songs: Place Value • Number Patterns • Place Value • Compose • Patterns of 2-digit Numbers • Patterns of 3-digit Numbers • Sequences of 2-digit Numbers • Sequences of 3-digit Numbers ***Classroom Playlists*** • VA: 2: Number and Number Sense: Place Value • VA: 2: Number and Number Sense: Expanded Form	• Grouping Hundreds

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
2.NS.2f 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.	• Number Line	
2.NS.2g Compare two whole numbers, each 999 or less, represented concretely, pictorially, or symbolically, using words (greater than, less than, or equal to and symbols	• 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Compare Numbers 2 digit • VA: 2: Number and Number Sense: Compare Numbers 3 digit	• Compare Two-digit Numbers • Less Than, Equal to, or Greater Than
2.NS.2h Order up to three whole numbers, each 999 or less, represented concretely, pictorially, or symbolically from least to greatest and greatest to least.	• 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Compare Numbers 2 digit • VA: 2: Number and Number Sense: Compare Numbers 3 digit	

Virginia Standards	Waterford Digital Activities	Waterford Resources
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.		
2.NS.3a Model and describe fractions as representing equal-size parts of a whole.	• Songs: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Fractions of Regions • Fractions of Groups ***Classroom Playlists*** • VA: 2: Number and Number Sense: Equal Size Fractions	• Fractions
2.NS.3b 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.	• Songs: Fractions • Books: Half for You and Half for Me; Halves and Fourths and Thirds; The Fraction Twins • Fractions • Equal Part Fractions • Fractions of Regions • Fractions of Groups ***Classroom Playlists*** • VA: 2: Number and Number Sense: Label Fractions	• Fractions
2.NS.3c Compose the whole for a given fractional part and its value (in context for halves, fourths, eighths, thirds, and sixths (e.g., when given 1/4 , determine how many pieces would be needed to make 4/4 .	• Songs: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Fractions	• Fractions

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
2.NS.3d 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.	• Songs: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Fractions	• Fractions
2.NS.3e Given a context, represent, name, and write fractional parts of a whole for halves, fourths, eighths, thirds, and sixths using: **2.NS.3ei** region/area models (e.g., pie pieces, pattern blocks, geoboards;	• Songs: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Label Fractions	• Fractions
2.NS.3eii length models (e.g., paper fraction strips, fraction bars, rods, number lines; and	• Songs: 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	• Fractions

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***continued***.		
2.NS.3eiii set models (e.g., chips, counters, cubes.	• Songs: 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	• Fractions
2.NS.3f Compare unit fractions for halves, fourths, eighths, thirds, and sixths using words (greater than, less than or equal to and symbols (>,	• Songs: 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	• Fractions
2.NS.4 The student will solve problems that involve counting and representing money amounts up to $2.00.		
2.NS.4a Identify a quarter and its value and determine multiple ways to represent the value of a quarter using pennies, nickels, and/or dimes.	• Songs: Money; Save Your Pennies • Books: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Money: Count Coins	• Coin Identification and Value

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.NS.4 The student will solve problems that involve counting and representing money amounts up to $2.00 *continued*.		
2.NS.4b 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.	• Songs: Money; Save Your Pennies • Books: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Money: Counting Money	• Coin Identification and Value
2.NS.4c Construct a set of coins and/or bills to total a given amount of money whose value is $2.00 or less.	• Songs: Money; Save Your Pennies • Books: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Money: Counting Money	• Coin Identification and Value

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.NS.4 The student will solve problems that involve counting and representing money amounts up to $2.00 *continued*.		
2.NS.4d 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).	• Songs: Money; Save Your Pennies • Books: 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 ***Classroom Playlists*** • VA: 2: Number and Number Sense: Money: Counting Money	• Coin Identification and Value
Computation and Estimation		
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.		
2.CE.1a 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.	• Songs: Rounding • Books: The Fable Fair • Round to Tens • Addition and Subtraction Relationship • Addition • Subtraction	
2.CE.1b 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.	• Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction ***Classroom Playlists*** • VA: 2: Computation and Estimation: Addition and Subtraction Fact Families	• Add and subtract within 100

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***contined***.		
2.CE.1c 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.	• 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 ***Classroom Playlists*** • VA: 2: Computation and Estimation: Add without Regrouping • VA: 2: Computation and Estimation: Add with Regrouping • VA: 2: Computation and Estimation: Subtract without Regrouping • VA: 2: Computation and Estimation: Subtract with Regrouping	• One- and two-step word problems within 100
2.CE.1d Demonstrate fluency with addition and subtraction within 20 by applying reasoning strategies (e.g., doubles, near doubles, make-a-ten, compensations, inverse relationships .	• 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	• Add and subtract within 20

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***contined***.		
2.CE.1e Recall with automaticity addition and subtraction facts within 20.	• 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 • Speed Games ***Classroom Playlists*** • VA: 2: Computation and Estimation: Fluently Add • VA: 2: Computation and Estimation: Fluently Subtract	• Add and subtract within 20
2.CE.1f 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 .	• Songs: Fact Families • Books: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences ***Classroom Playlists*** • VA: 2: Computation and Estimation: Addition and Subtraction Fact Families	• Add and subtract within 20

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 ***contined***.		
2.CE.1g 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 =_ .	• Songs: Fact Families • Books: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences • Missing Addends • Missing Minuends and Subtrahends ***Classroom Playlists*** • VA: 2: Computation and Estimation: Missing Addends • VA: 2: Computation and Estimation: Missing Minuends and Subtrahends	• Add and subtract within 20
2.CE.1h 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 .	• Songs: Fact Families • Books: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences ***Classroom Playlists*** • VA: 2: Computation and Estimation: Addition and Subtraction Fact Families	• Add and subtract within 20
2.CE.1i Describe the not equal symbol (≠ as representing a relationship where expressions on either side of the not equal symbol represent different values and justify reasoning.		• Equal Sign • Less than, equal to, or greater than
2.CE.1j 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 ≠ 31 +15 .	• Songs: Greater Than, Less Than • Greater Than, Less Than • More Than, Fewer Than ***Classroom Playlists*** • VA: 2: Computation and Estimation: Greater Than, Less Than	• Equal Sign • Less than, equal to, or greater than

Virginia Standards	Waterford Digital Activities	Waterford Resources
Measurement and Geometry		
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.		
2.MG.1a Explain the purpose of various measurement tools and how to use them appropriately by: **2.MG.1ai** identifying a ruler as an instrument to measure length;	• Measurement Tools • Length ***Classroom Playlists*** • VA: Measurement and Geometry: Measurement Tools • VA: Measurement and Geometry: Length • VA: Measurement and Geometry: Nonstandard	• Measurement Tools
2.MG.1aii identifying different types of scales as instruments to measure weight; and	• Measurement Tools • Weight ***Classroom Playlists*** • VA: Measurement and Geometry: Weight	
2.MG.1aiii identifying different types of measuring cups as instruments to measure liquid volume.	• Measurement Tools • Capacity ***Classroom Playlists*** • VA: Measurement and Geometry: Capacity • VA: Measurement and Geometry: Capacity: Liters • VA: Measurement and Geometry: Capacity: Quarts and Pints	
2.MG.1b Use U.S. Customary units to estimate, measure, and compare the two for reasonableness: **2.MG.1bi** the length of an object to the nearest inch, using a ruler;	• Measurement Tools • Length	• Measurement Tools
2.MG.1bii the weight of an object to the nearest pound, using a scale; and	• Measurement Tools • Weight	
2.MG.1biii the liquid volume of a container to the nearest cup, using a measuring cup.	• Measurement Tools • Capacity	

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.MG.2 The student will demonstrate an understanding of the concept of time to the nearest five minutes, using analog and digital clocks.		
2.MG.2a Identify the number of minutes in an hour (60 minutes and the number of hours in a day (24 hours .	• 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	
2.MG.2b 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?.	• Songs: Days of the Week; Months of the Year • Books: How Long Is a Minute? • Compare Minutes to Hours • Observe a Simple System	
2.MG.2c Show, tell, and write time to the nearest five minutes, using analog and digital clocks.	• Songs: Telling Time; Clock Hands • Books: Mr. Romano's Secret: A Time Story • Tell Time • Tell Time to Five Minutes • Tell Time to the Minute ***Classroom Playlists*** • VA: Measurement and Geometry: Tell Time to Five Minutes	• Tell and Write Time
2.MG.2d 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.	• Songs: Telling Time • Books: Mr. Romano's Secret: A Time Story • Tell Time • Tell Time to Five Minutes • Tell Time to the Minute	• Tell and Write Time

Virginia Standards	Waterford Digital Activities	Waterford Resources
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.		
2.MG.3a 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.	• Songs: Symmetry • Books: Symmetry and Me • Symmetry • Geoboard ***Classroom Playlists*** • VA: 2: Measurement and Geometry: Symmetry	
2.MG.3b Create figures with at least one line of symmetry using various concrete and pictorial representations.	• Songs: Symmetry • Books: Symmetry and Me • Symmetry • Geoboard	
2.MG.3c Describe the two resulting figures formed by a line of symmetry as being congruent (having the same shape and size.	• Songs: Congruent Parts • Congruence ***Classroom Playlists*** • VA: 2: Measurement and Geometry: Symmetry	
2.MG.4 The student will describe, name, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms.		
2.MG.4a Trace faces of solid figures (cubes and rectangular prisms to create the set of plane figures related to the solid figure.	• Songs: Shapes, Shapes, Shapes; Corners and Sides; Kites • Books: The Shape of Things • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Space Shapes • World Shapes • Geoboard	• Draw Shapes
2.MG.4b Compare and contrast models and nets (cutouts of cubes and rectangular prisms (e.g., number and shapes of faces, edges, vertices.	• Songs: Corners and Sides • Books: The Shape of Things • Space Shapes • World Shapes • Geoboard	• Draw Shapes

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.MG.4 The student will describe, name, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms *continued.*		
2.MG.4c 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.	• Songs: Corners and Sides • Books: The Shape of Things • Space Shapes • World Shapes • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Geoboard ***Classroom Playlists*** • VA: 2: Measurement and Geometry: Three-dimensional Shapes	
2.MG.4d 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 .	• Songs: Corners and Sides • Books: The Shape of Things • Space Shapes • World Shapes • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus ***Classroom Playlists*** • VA: 2: Measurement and Geometry: Three-dimensional Shapes	
Probability and Statistics		
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.		
2.PS.1a 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 .	• Songs: Tallying; Graphing • Books: One More Cat • Tally Marks • Graphs	• Data Categorization

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
2.PS.1b 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 .	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Tally Marks • Make a Table • Bar Graphs • Picture Graphs • Use Graphs and Tables ***Classroom Playlists*** • VA: Probability and Statistics: Tally Marks	• Graphs
2.PS.1c 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.	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Picture Graphs • Make a Table • Use Graphs and Tables ***Classroom Playlists*** • VA: Probability and Statistics: Picture Graph	• Graphs
2.PS.1d 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 .	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Make a Table • Bar Graphs • Use Graphs and Tables ***Classroom Playlists*** • VA: Probability and Statistics: Bar Graph	• Graphs

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*.		
2.PS.1e Analyze data represented in pictographs and bar graphs and communicate results: **2.PS.1ei** 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	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables	• Graphs
2.PS.1eii draw conclusions about the data and make predictions based on the data.	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables	• Graphs
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.		
2.PFA.1a Identify and describe repeating and increasing patterns.	• Songs: Train Station Patterns • Books: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game	

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.PFA.1 The student will describe, extend, create, and transfer repeating and increasing patterns (limited to addition of whole numbers using various representations *continued.*		
2.PFA.1b Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, pictures, and numbers.	• Songs: Train Station Patterns • Books: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: Extend Patterns	
2.PFA.1c Create a repeating or increasing pattern using various representations (e.g., objects, pictures, numbers.	• Songs: Train Station Patterns • Books: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game ***Classroom Playlists*** • VA: Patterns, Functions, and Algebra: Extend Patterns	
2.PFA.1d 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.	• Songs: Train Station Patterns • Books: How King Snake Got His Pattern • Patterns • Pattern: AB; ABB; ABC • Extend Patterns • Label Patterns • Logic Game	

Virginia Standards	Waterford Digital Activities	Waterford Resources
SCIENCE		
Kindergarten		
Scientific and Engineering Practices		
K.1 The student will demonstrate an understanding of scientific and engineering practices by		
K.1a asking questions and defining problems · **ask** questions based on observations · **identify** a problem based on need · **make** predictions based on observations	• Songs: The Scientific Method • Science Investigation • Observe a Simple System	
K.1b 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	• Songs: The Scientific Method • Science Investigation • Measurement Tools • Science Tools	
K.1c 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	• Songs: The Scientific Method • Science Investigation • Sort • Graphs • Bar Graphs • Picture Graphs • Use Graphs and Tables	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.1 The student will demonstrate an understanding of scientific and engineering practices by *continued*		
K.1d constructing and critiquing conclusions and explanations · **make** simple conclusions based on data or observations	• Songs: The Scientific Method • Science Investigation	
K.1e developing and using models · **distinguish** between a model and an actual object	• Books: Imagination Shapes; I Want to Be a Scientist Like Wilbur and Orville Wright	
K.1f 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	• Capacity • Length • Big and Little • Tall and Short • Heavy and Light	• 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		
K.2a pushes and pulls can cause an object to move;	• Songs: Push and Pull • Books: Mr. Mario's Neighborhood • Push and Pull ***Classroom Playlists*** • VA: K: Force, Motion, and Energy: Push and Pull	• How It Works

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.2 The student will investigate and understand that pushes and pulls affect the motion of objects. Key ideas include *contined*		
K.2b pushes and pulls can change the direction of an object; and	• Songs: Push and Pull • Books: Mr. Mario's Neighborhood • Push and Pull ***Classroom Playlists*** • VA: K: Force, Motion, and Energy: Push and Pull	• How It Works
K.2c changes in motion are related to the strength of the push or pull.	• Songs: Push and Pull • Books: Mr. Mario's Neighborhood • Push and Pull ***Classroom Playlists*** • VA: K: Force, Motion, and Energy: Push and Pull	• How It Works
Matter		
K.3 The student will investigate and understand that physical properties of an object can be described. Properties include		
K.3a colors;	• Squirrel's Zoo Colors • Color Practice • Red, Yellow, and Blue	• Colors
K.3b shapes and forms;	• Songs: Marmot Shapes; Corners and Sides • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Rhombus, Octagon	
K.3c textures and feel; and	• Touch	• Texture Sort

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.3 The student will investigate and understand that physical properties of an object can be described. Properties include *continued*		
K.3d relative sizes and weights of objects.	• Songs: Savanna Size • Capacity • Length • Weight • Big and Little • Tall and Short • Heavy and Light • Measurement Tools ***Classroom Playlists*** • VA: K: Matter: Big and Little • VA: K: Matter: Tall and Short • VA: K: Matter: Heavy and Light	• Measurement
K.4 The student will investigate and understand that water is important in our daily lives and has properties. Key ideas include		
K.4a water has many uses;	• Songs: Water • Books: Water • Animals Need Water • Plants Need Water • Water • Water Uses • Uses of Water • Care of Water	• Our Earth
K.4b water can be found in many places;	• Books: Water Is All Around • Water • Water Sources • Natural Resources ***Classroom Playlists*** • VA: K: Matter: Water Sources	• Our Earth

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.4 The student will investigate and understand that water is important in our daily lives and has properties. Key ideas include *continued*		
K.4c water occurs in different phases; and	• Songs: Precipitation • Books: Water • Water Cycle • Water • States of Water • Heat Changes Water ***Classroom Playlists*** • VA: K: Matter: States of Water	• Our Earth
K.4d water flows downhill.	• Water Cycle	
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		
K.5a the five basic senses correspond to specific human body structures; and	• Songs: Five Senses • Books: I Wish I Had Ears Like a Bat • Sight • Hearing • Touch • Smell • Taste ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Sight • VA: K: LIving Systems and Processes: Hearing • VA: K: LIving Systems and Processes: Touch • VA: K: LIving Systems and Processes: Smell • VA: K: LIving Systems and Processes: Taste	• The World Around Us

Virginia Standards	Waterford Digital Activities	Waterford Resources
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 *continued*		
K.5b senses are used in our daily lives.	• Songs: Five Senses • Books: I Wish I Had Ears Like a Bat • Sight • Hearing • Touch • Smell • Taste ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Sight • VA: K: LIving Systems and Processes: Hearing • VA: K: LIving Systems and Processes: Touch • VA: K: LIving Systems and Processes: Smell • VA: K: LIving Systems and Processes: Taste	• 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		
K.6a all things can be classified as living or nonliving; and	• Songs: Living and Nonliving • Living or Nonliving ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Living or Nonliving	• Living Things
K.6b living organisms have certain characteristics that distinguish them from nonliving objects.	• Songs: Living and Nonliving • Books: Mela's Water Pot • Living or Nonliving • Sun • Water • Plants and Animals Need Air • Animals Need Water • Plants Need Water ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Living or Nonliving	• Water for Plants • Light for Plants • Green and Growing

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.7 The student will investigate and understand that plants and animals have basic needs and life processes. Key ideas include		
K.7a living things need adequate food, water, shelter, air, and space to survive;	• Songs: 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	• Water for Plants • Light for Plants • Green and Growing
K.7b plants and animals have life cycles; and	• Books: The Old Maple Tree; A Seed Grows • Animal Life Cycle and Growth • Plant Life Cycle and Growth ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Animal Life Cycles • VA: K: LIving Systems and Processes: Plant Life Cycles	• **Life Cycle:** Bird; Butterfly; Frog
K.7c offspring of plants and animals are similar but not identical to their parents or to one another.	• Books: George and Jack; A Seed Grows • Build K • Knowledge: Mine	• 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		
K.8a the sun provides light and warms Earth's surface;	• Songs: Sun Blues • Sun • Sun, Moon, and Earth ***Classroom Playlists*** • VA: K: Earth and Space Systems: The Sun	• The Sky Above Us
K.8b shadows can be produced when sunlight or artificial light is blocked by an object; and	• Books: My Family Campout • Light Properties • Properties of Light • Light Experiment	• Sun and Shade Pictures
K.8c objects in shadows and objects in sunlight have different temperatures.	• Science Tools	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.9 The student will investigate and understand that there are patterns in nature. Key patterns include		
K.9a daily weather;	• Songs: Precipitation • Books: Whatever the Weather • Weather • Weather Patterns • Calendar/Graph Weather • Clouds ***Classroom Playlists*** • VA: K: Earth and Space Systems: Weather	• The Weather Around Us; • Weather • The Sky Above Us
K.9b seasonal changes; and	• Songs: Seasons • Books: That's What I Like: A Book About Seasons; The Four Seasons • Calendar/Graph Weather • Spring • Summer • Fall • Winter ***Classroom Playlists*** • VA: K: Earth and Space Systems: Winter • VA: K: Earth and Space Systems: Spring • VA: K: Earth and Space Systems: Summer • VA: K: Earth and Space Systems: Fall	• The Weather Around Us; • Weather • The Sky Above Us
K.9c day and night.	• Songs: The Moon; Sun Blues • Books: Moon Song; Star Pictures; My Family Campout • Sun • Moon • Moon, Sun and Earth • Constellations	• The Moon • The Sky Above Us
K.10 The student will investigate and understand that change occurs over time. Key ideas include		
K.10a natural and human-made things change over time;	• Songs: Rock Cycle • Books: Fossils Under Our Feet • Rock Cycle • Fossils	

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.10 The student will investigate and understand that change occurs over time. Key ideas include *continued*		
K.10b living and nonliving things change over time;	• Songs: Plants Are Growing; Rock Cycle • Books: Fossils Under Our Feet • Animal Life Cycle and Growth • Plant Life Cycle and Growth • Rock Cycle • Fossils ***Classroom Playlists*** • VA: K: LIving Systems and Processes: Animal Life Cycles • VA: K: LIving Systems and Processes: Plant Life Cycles	
K.10c changes can be observed and measured; and	• Songs: Plants Are Growing; Rock Cycle • Books: Fossils Under Our Feet • Animal Life Cycle and Growth • Plant Life Cycle and Growth • Rock Cycle • Fossils	
K.10d changes may be fast or slow.	• 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		
K.11a some materials and objects can be used over and over again;	• Songs: Conservation; Pollution Rap; Inventing • Books: Inventions All Around • Natural Resources • Pollution and Recycling ***Classroom Playlists*** • VA: K: Earth Resources: Natural Resources	• Recycling • Our Earth

Virginia Standards	Waterford Digital Activities	Waterford Resources
K.11 The student will investigate and understand that humans use resources. Key ideas include *continued*		
K.11b materials can be recycled; and	• Songs: Conservation; Pollution Rap • Natural Resources • Pollution and Recycling	• Recycling • Our Earth
K.11c choices we make impact the air, water, land and living things.	• 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	• Recycling • Our Earth
Grade One		
Scientific and Engineering Practices		
1.1 The student will demonstrate an understanding of scientific and engineering practices by		
1.1a 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	• Songs: The Scientific Method; Inventing • Book: Inventions All Around • Science Investigation • Observe a Simple System	
1.1b 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	• Songs: The Scientific Method • Science Investigation • Measurement Tools	

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.1 The student will demonstrate an understanding of scientific and engineering practices by *continued*		
1.1c 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	• Songs: Graphing; Tallying • Books: One More Cat • Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables • Sort • Weather Patterns	
1.1d constructing and critiquing conclusions and explanations · **make** simple conclusions based on data or observations · **recognize** unusual or unexpected results	• Songs: The Scientific Method • Science Investigation	
1.1e 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.	
1.1f obtaining, evaluating, and communicating information · **communicate** observations and data using simple graphs, pictures, drawings, numbers, speech and/or writing	• Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables	

Virginia Standards	Waterford Digital Activities	Waterford Resources
Force, Motion, and Energy		
1.2 The student will investigate and understand that objects can move in different ways. Key ideas include		
1.2a objects may have straight, circular, spinning, and back-and-forth motions; and	• Songs: Gravity; Sound; Push and Pull • Books: Up and Down; What Sounds Say • Push and Pull	• Air Movement
1.2b objects may vibrate and produce sound.	• Song: Sound • Book: What Sounds Say • Sound Waves ***Classroom Playlists*** • VA: 1: Force, Motion, and Energy: Sound Waves	• 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		
1.3a objects are made of one or more materials with different physical properties and can be used for a variety of purposes;	• Materials • Density Experiment	
1.3b when a material is changed in size most physical properties remain the same; and	• Matter • Changes in Matter ***Classroom Playlists*** • VA: 1: Matter: Matter: Solid and Liquid	
1.3c the type and amount of material determine how much light can pass through an object.	• Book: My Family Campout • Light Properties • Properties of Light • Light Experiment	

Virginia Standards	Waterford Digital Activities	Waterford Resources
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		
1.4a plants need nutrients, air, water, light, and a place to grow;	• 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 ***Classroom Playlists*** • VA: 1: Living Systems and Processes: Plants Needs	• Water for Plants • Green and Growing
1.4b structures of plants perform specific functions; and	• Song: Plants Are Growing • Functions of Plant Parts • Plants ***Classroom Playlists*** • VA: 1: Living Systems and Processes: Plant Parts	
1.4c plants can be classified based on a variety of characteristics.	• 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		
1.5a animals need air, food, water, shelter, and space (habitat);	• Songs: Water; Food From Plants • Books: Mela's Water Pot; Everybody Needs to Eat • Sun • Water • Plants and Animals Need Air • Animals Need Water ***Classroom Playlists*** • VA: 1: Living Systems and Processes: Animal Needs	

Virginia Standards	Waterford Digital Activities	Waterford 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 *continued*		
1.5b animals have different physical characteristics that perform specific functions; and	• Song: Animal Bodies • Books: I Wish I Had Ears Like a Bat; Fawn Eyes; Animal Bodies • Animal Teeth • Animal Bodies • Animal Tracks	
1.5c animals can be classified based on a variety of characteristics.	• 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		
1.6a the sun is the source of energy and light that warms the Earth's land, air, and water; and	• Song: Sun Blues • Sun • Sun, Moon, and Earth	
1.6b the sun's relative position changes in the Earth's sky throughout the day.	• Sun • Light Exploration • Sun, Moon, and Earth	• The Sky Above Us

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.7 The student will investigate and understand that there are weather and seasonal changes. Key ideas include		
1.7a changes in temperature, light, and precipitation occur over time;	• Songs: Seasons; Precipitation • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Weather • Spring • Summer • Fall • Winter ***Classroom Playlists*** • VA: 1: Earth and Space Systems: Weather Patterns	• The Weather Around Us
1.7b there are relationships between daily weather and the season; and	• 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 ***Classroom Playlists*** • VA: 1: Earth and Space Systems: Weather Patterns	• The Weather Around Us

Virginia Standards	Waterford Digital Activities	Waterford Resources
1.7 The student will investigate and understand that there are weather and seasonal changes. Key ideas include *continued*		
1.7c changes in temperature, light, and precipitation affect plants and animals, including humans.	• Songs: Seasons; Precipitation • Books: That's What I Like: A Book About Seasons; The Four Seasons; Whatever the Weather • Weather Affects People and Animals • Weather • Spring • Summer • Fall • Winter ***Classroom Playlists*** • VA: 1: Earth and Space Systems: Weather Affects People and Animals	• Light for Plants • The Weather Around Us
Earth Resources		
1.8 The student will investigate and understand that natural resources can be used responsibly. Key ideas include		
1.8a most natural resources are limited;	• Song: Conservation • Natural Resources ***Classroom Playlists*** • VA: 1: Earth Resources: Natural Resources	
1.8b human actions can affect the availability of natural resources; and	• 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	• Recycling • Our Earth
1.8c reducing, reusing, and recycling are ways to conserve natural resources.	• Songs: Conservation; Pollution Rap • Natural Resources • Pollution and Recycling • Care of Earth ***Classroom Playlists*** • VA: 1: Earth Resources: Care of Earth	• Recycling • Our Earth

Virginia Standards	Waterford Digital Activities	Waterford Resources
Grade Two		
Scientific and Engineering Practices		
2.1 The student will demonstrate an understanding of scientific and engineering practices by		
2.1a 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	• Songs: The Scientific Method; Inventing • Books: Inventions All Around; I Want to Be a Scientist Like: Thomas Edison; Wilbur and Orville Wright • Science Investigation	
2.1b 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	• Songs: The Scientific Method; Clock Hands; Telling Time • Science Investigation • Measurement Tools • Weather Tools • Tell Time	
2.1c interpreting, analyzing, and evaluating data · **organize** and represent data in pictographs and bar graphs · **read** and interpret data represented in pictographs and bar graphs	• Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables	

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.1 The student will demonstrate an understanding of scientific and engineering practices by *continued*		
2.1d constructing and critiquing conclusions and explanations · **make** simple conclusions based on data or observations · **distinguish** between opinion and evidence · **recognize** unusual or unexpected results	• Song: The Scientific Method • Books: How Did the Chicken Cross the Road?; Bandage Bandit • Science Investigation	
2.1e developing and using models · **-use** models to demonstrate simple phenomena and natural processes	• Books: How Did the Chicken Cross the Road?; Inventions All Around; Sound • Simple Machines • Science Investigation	
2.1f obtaining, evaluating, and communicating information · **communicate** observations and data using simple graphs, drawings, numbers, speech, and/or writing	• Songs: Graphing; Tallying; The Scientific Method • Books: One More Cat • Graphs • Picture Graphs • Bar Graphs • Use Graphs and Tables	• Graphs
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		
2.2a forces from direct contact can cause an object to move;	• Songs: Push and Pull • Books: Mr. Mario's Neighborhood • Push and Pull ***Classroom Playlists*** • VA: 2: Force, Motion, and Energy: Forces	• How It Works

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.2 The student will investigate and understand that different types of forces may cause an object's motion to change. Key ideas include *continued*		
2.2b some forces, including gravity and magnetism, can cause objects to move from a distance; and	• Songs: Gravity • Books: Up and Down	
2.2c forces have applications in our lives.	• 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		
2.3a matter has mass and takes up space;	• Songs: Matter; Solid or Liquid • Books: Pancakes Matter • Matter • Solid and Liquid • Solid, Liquid, Gas • Changes in Matter • Matter Experiment ***Classroom Playlists*** • VA: 2: Matter: Solid or Liquid • VA: 2: Matter: Solid, Liquid, Gas	• Solids, Liquids, and Gases • How It Works
2.3b solids, liquids, and gases have different characteristics; and	• Songs: Matter; Solid or Liquid • Books: Pancakes Matter • Matter • Solid and Liquid • Solid, Liquid, Gas • Changes in Matter • Matter Experiment	• Solids, Liquids, and Gases • How It Works

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.3 The student will investigate and understand that matter can exist in different phases. Key ideas include *continued*		
2.3c heating and cooling can change the phases of matter.	• Songs: Matter; Solid or Liquid • Books: Pancakes Matter • Matter • Solid and Liquid • Solid, Liquid, Gas • Changes in Matter • Matter Experiment ***Classroom Playlists*** • VA: 2: Matter: Changes in Matter	• 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		
2.4a animals have life cycles; and	• Animal Life Cycle and Growth	
2.4b plants have life cycles.	• 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		
2.5a plants and animals are interdependent with their living and nonliving surroundings;	• Song: Food From Plants • Book: Everybody Needs to Eat	
2.5b an animal's habitat provides all of its basic needs; and	• Book: Animal Bodies • Deserts • Oceans • Mountains • Rainforests ***Classroom Playlists*** • VA: 2: Living Systems and Processes: Habitats:	
2.5c habitats change over time due to many influences.	• Books: Turtle's Pond; The Old Maple Tree; Winter Snoozers	

Virginia Standards	Waterford Digital Activities	Waterford 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		
2.6a different types of weather have specific characteristics;	• 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 ***Classroom Playlists*** • VA: 2: Earth and Space Systems: Weather: Clouds • VA: 2: Earth and Space Systems: Weather: Precipitation	• The Weather Around Us
2.6b measuring, recording, and interpreting weather data allows for identification of weather patterns; and	• 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	• The Weather Around Us
2.6c tracking weather allows us to prepare for the weather and storms.	• 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	• The Weather Around Us

Virginia Standards	Waterford Digital Activities	Waterford Resources
2.7 The student will investigate and understand that weather patterns and seasonal changes affect plants, animals, and their surroundings. Key ideas include		
2.7a weather and seasonal changes affect the growth and behavior of living things;	• 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	
2.7b wind and weather can change the land; and	• Rock Cycle ***Classroom Playlists*** • VA: 2: Living Systems and Processes: Rock Cycle	
2.7c changes can happen quickly or slowly over time.	• 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	• Rocks
Earth Resources		
2.8 The student will investigate and understand that plants are important natural resources. Key ideas include		
2.8a the availability of plant products affects the development of a geographic area;	• 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	• Water for Plants • Green and Growing

Books and Related Activities

Waterford.org

Pre-Math and 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 / Fun 15 / 16 Ants / Counting to 17 / 18 Carrot Stew / 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

Marching Band Counting / Flower Counting / Country 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 Fish to Catch / Fun 15 / 16 Ants / Counting to 17 / 18 Carrot Stew / 19 On the Beach / 20 Fingers and Toes

Basic Math and Science

Math and Science Books

One More Cat / Can You Guess? A Story for Two Voices / 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 / Navajo Beads / Where in the World Would You Go Today? / I Want to Be a Scientist Like Wilbur and Orville Wright

Fluent Math and Science

Math and 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

Research-Driven Development

Waterford is committed to ongoing development based on the latest research findings. Please note that this correlation is accurate as of the date on the cover.

Family Engagement Resources

Waterford.org

Spanish Family Engagement Resources

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

Songs

Beginning Math Songs

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

Nursery Songs and Rhymes

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

Beginning Reading Songs

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

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

Weekly Homelink Newsletters

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

Math Homelink Newsletters

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

Science Homelink Newsletters

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

Reading Homelink Newsletters

Alphabet Knowledge Comprehension and Vocabulary

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

Readiness Skills Letters

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

Phonological Awareness Letters

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

Waterford Mentor

***Waterford Mentor** is a secure website where families can log in to see their child's usage and learning achievements. Waterford families also receive short messages with ideas on how to engage in their child's learning and have access to hundreds of resources and activities. Waterford Mentor is available online and in the Mentor app (for iOS and Android).*