

100%
Aligned

Alignment

October 2025

**Waterford
Early Learning:
Math & Science
K-2**

**North Dakota
Mathematics Content
Standards 2023 &
Science 2019**

This document provides a detailed alignment of **Waterford Early Learning to North Dakota Mathematics Content Standards 2023 & Science 2019**.

Alignment Description

This document aligns North Dakota Mathematics Content Standards 2023 & Science 2019 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](https://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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North Dakota Standards	Waterford Digital Activities	Waterford Resources
Mathematics		
Kindergarten		
Number and Operations (NO) Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.		
Counting and Cardinality (CC) Learners will understand the relationship between numerical symbols, names, quantities, and counting sequences.		
K.NO.CC.1 Count verbally in sequential order by ones and tens to 100, making accurate decuple transitions (e.g., 89 to 90). Count verbally forward from any given number within 100.	- Number Songs - Counting Songs - Number Counting - Counting On - Number Instruction - Skip Counting	Count to 100 by Ones and Tens
K.NO.CC.2 Count backward from 20 by ones and from a given number within 10.	- Songs: Counting Backward - Books: A Space Adventure - Counting Back - Count Down	
K.NO.CC.3 Identify and write any given numeral within 20.	- Math Books - Counting Songs - Number Songs - Number Counting - Number Instruction	Write Numbers 0-20
K.NO.CC.4 Recognize and verbally label arrangements, without counting, for briefly shown collections up to 10 (e.g., "I saw 5." How do you know?" "I saw 3 and 2, that is 5.").	- Moving Target (Dots) - Make and Count Groups	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Counting and Cardinality (CC) Learners will understand the relationship between numerical symbols, names, quantities, and counting sequences <i>continued</i>.		
K.NO.CC.5 Count and tell how many objects up to 20 are in an arranged pattern or up to 10 objects in a scattered configuration. Represent a quantity of up to 20 with a numeral.	- Counting Songs - Number Songs - Make and Count Groups - Number Counting - Number Instruction - Numbers Review - One-to-one Correspondence	How Many?
Base Ten (NBT) Learners will understand the place value structure of the base-ten number system and represent, compare, and perform operations with multi-digit whole numbers and decimals.		
K.NO.NBT.1 Compose and decompose numbers from 11 to 19 using a group of ten ones and some more ones using a model, drawing, or equation.	Place Value	Tens and Ones
K.NO.NBT.2 Compare two numbers between 1 and 20 using words greater than, less than, or equal to.	- Songs: Greater Than, Less Than - Books: For the Birds - Greater Than, Less Than - More Than, Fewer Than - More Than - Fewer Than	Compare Two Numbers
Fractions (NF) Learners will understand fractions and equivalency to represent, compare, and perform operations of fractions and decimals.		
NOTE: Standards begin at first grade.		

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Algebraic Reasoning (AR) Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.		
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions.		
K.AR.OA.1 Automatically add and subtract within 5.	- Songs: On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction - Books: Five Delicious Muffins - Add Groups - Subtract Groups - Minuends - Sums - Act Out Addition - Act Out Subtraction	
K.AR.OA.2 For any number from 1 to 9, find the number that makes 10 when added to the given number, sharing the answer with a model, drawing, or equation.	- Make 10 - Missing Addends - Count On - Act Out Addition	Numbers that Make 10
K.AR.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way using verbal explanations, objects, or drawings.	- Make and Count Groups - Add Groups - Subtract Groups - Act Out Subtraction - Make 10	Decompose Numbers
K.AR.OA.4 Solve authentic problems with addition by putting together or adding to within 10.	- Songs: On the Bayou; Bee Happy Addition - Add Groups - Sums - Act Out Addition	Addition and Subtraction Word Problems

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions <i>continued</i>.		
K.AR.OA.5 Solve authentic problems with subtraction by taking apart or taking from within 10.	- Songs: Bakery Subtraction; Subtract Those Cars; Circus Subtraction - Books: Five Delicious Muffins - Subtract Groups - Minuends - Act Out Subtraction	Addition and Subtraction Word Problems
K.AR.OA.6 Recognize, duplicate, complete, and extend repeating patterns in a variety of contexts (e.g., shape, color, size, objects, sounds, movements).	- Songs: Train Station Patterns - Patterns - Pattern AB - Pattern ABB - Pattern ABC	
Geometry and Measurement (GM) Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.		
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane.		
K.GM.G.1 Name shapes and identify them as two-dimensional (squares, circles, triangles, rectangles) regardless of their orientations or overall sizes.	- Songs: Marmot Shapes; Shapes, Shapes, Shapes - Books: The Shape of Things; Imagination Shapes - Circle, Square, Triangle, Rectangle - Star, Semicircle, Octagon, Oval, Rhombus - Simple Shapes	Shape Recognition
K.GM.G.2 Name shapes and identify them as three-dimensional (cubes and spheres) regardless of their orientations or overall sizes.	- Songs: Kites - Space Shapes - Geoboard - Tangrams	Two-Dimensional Shapes

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane <i>continued</i>.		
K.GM.G.3 Compare and classify two-dimensional shapes to describe their similarities, differences, and attributes (squares, circles, triangles, rectangles).	- Songs: Corners and Sides - Simple Shapes - Solid Shapes - Tangrams - Similar Figures	Compare Shapes
K.GM.G.4 Compose a geometric shape by combining two or more simple shapes.	- Geoboard - Tangrams	Form Larger Shapes
Measurement (M) Learners will represent and calculate measurement data, including time, money, and geometric measurement, and convert like measurement units within a given system.		
K.GM.M.1 Compare and order two objects with a common measurable attribute.	- Songs: Savanna Size, Measuring Plants - Capacity - Length - Big and Little - Tall and Short - Heavy and Light	Comparing Objects
K.GM.M.2 Tell time related to daily life (today, yesterday, tomorrow, morning, afternoon, night).	- Yesterday/Tomorrow - Today	
Data, Probability, and Statistics (DPS) Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic probability concepts		
Data (D) Learners will represent and interpret data.		
K.DPS.D.1 Sort and classify objects (up to 10) based on attributes and explain the reasoning used.	- Songs: Same and Different; All Sorts of Laundry - Books: Buttons, Buttons - Sort - Make and Count Groups	Classifying Objects

North Dakota Standards	Waterford Digital Activities	Waterford Resources
First Grade		
Number and Operations (NO) Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.		
Counting and Cardinality (CC) Learners will understand the relationship between numerical symbols, names, quantities, and counting sequences.		
1.NO.CC.1 Count forward by ones and tens from any given point within 120.	- Songs: Counting On; Skip Counting - Count On - Number Chart - Skip Count by 10	Count to 120
1.NO.CC.2 Count backward by ones and tens from a given number within 120.	- Songs: Counting Backward - Counting Back	
1.NO.CC.3 Represent several objects with a written numeral up to 120.	- Songs: Counting On - Count On - Number Chart	Count to 120
1.NO.CC.4 Recognize and verbally label arrangements, without counting, for briefly shown collections up to 20 (e.g., "I saw 16." How do you know?" "I saw 10 and 6, that is 16.")	- Moving Target (Dots) - Make and Count Groups	
1.NO.CC.5 Skip count by 5s and 10s from multiples and recognize the patterns of up to 10 skip counts.	- Songs: Skip Counting - Books: Jump Rope Rhymes - Skip Count by 5 - Skip Count by 10	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Base Ten (NBT) Learners will understand the place value structure of the base-ten number system and represent, compare, and perform operations with multi-digit whole numbers and decimals.		
1.NO.NBT.1 Understand that the two digits of a two-digit number represent a composition of some tens and some ones.	- Songs: Place Value - Place Value of 2-digit Numbers - Add with Manipulatives	Tens as a Bundle of Ones
1.NO.NBT.2 Compare two two-digit numbers using symbols $>$, $=$,	- Place Value - Greater Than, Less Than (2-digit Numbers)	Compare Two-digit Numbers
1.NO.NBT.3 Add within 100 using a two-digit number and a one-digit number using concrete models, drawings, and strategies that reflect an understanding of place value.	- Addition - Add Tens - Add with Manipulatives - Add Vertical Squares - Add with Beads - Addition and Subtraction Relationship - Add with Regrouping Concept - Add 2-digit and 1-digit Numbers with Regrouping	Adding within 100
1.NO.NBT.4 Subtract multiples of 10 within 100 using concrete models, drawings, and strategies that reflect an understanding of place value.	- Subtraction - Subtract Tens - Subtraction Patterns - Subtract - Place Value - Addition and Subtraction Relationship - Use Manipulatives	Subtracting in 10s
1.NO.NBT.5 Mentally add or subtract 10 to or from a given two-digit number and explain the reasoning used.	- Songs: Skip Counting - Books: Navajo Beads - Add - Subtract - Add Tens - Subtract Tens - Skip Count by 10 - Number Chart	Ten More or Less

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Fractions (NF) Learners will understand fractions and equivalency to represent, compare, and perform operations of fractions and decimals.		
1.NO.NF.1 Partition circles and rectangles into two and four equal shares using the language halves and fourths.	- Songs: Fractions - Books: Halves and Fourths and Thirds; Half For You and Half For Me - Equal-part Fractions - Label Parts of Fractions	Equal Shares
Algebraic Reasoning (AR) Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.		
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions.		
1.AR.OA.1 Automatically add and subtract within 10.	- 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 - Add 3 One-digit Numbers - Subtraction Patterns	Add and Subtract Within 20
1.AR.OA.2 For any number from 11 to 19, find the number that makes 20 when added to the given number, sharing the answer with a model, drawing, or equation.	- Missing Addends - Count On - Act Out Addition - Addition and Subtraction Fact Families	Add and Subtract Within 20
1.AR.OA.3 Decompose numbers less than or equal to 20 into pairs in more than one way.	- Make and Count Groups - Add Groups - Subtract Groups - Act Out Subtraction	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions <i>continued</i>.		
1.AR.OA.4 Solve authentic problems with addition, including three numbers and unknowns, within 20.	Add 3 One-digit Numbers	Word Problems Adding 3 Numbers
1.AR.OA.5 Solve authentic problems with subtraction, including unknowns, within 20.	- Songs: Fact Families; Doubles - Books: Facts About Families - Addition and Subtraction Fact Families - Addition and Subtraction Relationship	Word Problems Using Subtraction Within 20
1.AR.OA.6 Use the +, -, and = symbols accurately in an equation.	- Addition Sentences - Subtraction Sentences	Equal Sign
1.AR.OA.7 Identify, create, complete, and extend repeating, increasing, and decreasing patterns in a variety of contexts.	- Songs: Train Station Patterns - Books: How King Snake Got His Pattern - Patterns - Pattern AB - Pattern ABB - Pattern ABC	
Geometry and Measurement (GM) Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.		
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane.		
1.GM.G.1 Name shapes and identify them as two-dimensional (trapezoids, rhombuses, pentagons, hexagons, octagons).	- Songs: Shapes, Shapes, Shapes; Kites - Books: The Shape of Things; Imagination Shapes - Circle, Square, Triangle, Rectangle - Star, Semicircle, Octagon, Oval, Rhombus - Simple Shapes	Shape Recognition

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane <i>continued</i>.		
1.GM.G.2 Name and identify solids as three-dimensional (cylinders, cones, triangular prisms, and rectangular prisms).	- Songs: Shapes, Shapes, Shapes; Kites - Books: Imagination Shapes - Circle, Square, Triangle, Rectangle - Star, Semicircle, Octagon, Oval, Rhombus - Space Shapes - World Shapes	Two-Dimensional Shapes
1.GM.G.3 Determine geometric attributes of two-dimensional and three-dimensional shapes (squares, circles, triangles, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons, cubes, spheres, cylinders, cones, triangular prisms, and rectangular prisms).	- Songs: Corners and Sides - Simple Shapes - Solid Shapes - Space Shapes - Congruence - Tangrams - Similar Figures	Attributes
1.GM.G.4 Compose a geometric shape or solid by combining multiple two-dimensional shapes and/or three-dimensional solids (squares, circles, triangles, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons, cubes, spheres, cylinders, cones, triangular prisms, and rectangular prisms).	- Songs: Kites - Space Shapes - Geoboard - Tangrams	Form Larger Shapes

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Measurement (M) Learners will represent and calculate measurement data, including time, money, and geometric measurement; and convert like measurement units within a given system.		
1.GM.M.1 Measure the length of an object as a whole number of same-size, non-standard units from end to end.	- Length - Nonstandard Units of Length	Length Measurement
1.GM.M.2 Compare the lengths of three objects.	- Length - Nonstandard Units of Length	Order By Length
1.GM.M.3 Tell and write time to the hour and half-hour (including o'clock and half past) using analog and digital clocks.	- Songs: Clock Hands - Books: Mr. Romano's Secret: A Time Story - Tell Time to the Hour - Tell Time to the Half-Hour	Hours and Half-hours
1.GM.M.4 Identify and tell the value of a dollar bill, quarter, dime, nickel, and penny.	- Songs: Money - Books: Bugs For Sale - Coin Identification - Coin Value	Coin Identification and Value
1.GM.M.5 Count collections of coins (pennies, nickels, and dimes) relating to counting patterns by 1s, 5s, and 10s up to one dollar.	- Songs: Money - Books: Bugs For Sale - Coin Value - Count Quarters, Dimes, Nickels, and Pennies - Count Dimes, Nickels, and Pennies - Count Nickels and Pennies or Dimes and Pennies - Quarters - Skip Counting	Coin Identification and Value

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Data, Probability, and Statistics (DPS) Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic concepts of probability.		
1.DPS.D.1 Collect, organize, and represent data with up to three categories using picture and bar graphs.	- Songs: Graphing - Books: The Boonville Nine - Graphs - Bar Graphs - Picture Graphs	Data Categorization
1.DPS.D.2 Analyze data by answering descriptive questions.	- Songs: Tallying; Graphing - Books: One More Cat; The Boonville Nine - Tally Marks - Make a Table	Data Categorization
Second Grade		
Number and Operations (NO) Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.		
Counting and Cardinality (CC) Learners will understand the relationship between numerical symbols, names, quantities, and counting sequences.		
2.NO.CC.1 Count forward from any given number within 1000.	- Skip Count - Number Sequences and Patterns	Counting within 1000
2.NO.CC.2 Count backward from any given number within 1000.	- Songs: Counting Backward - Books: A Space Adventure - Counting Back - Count Down	
2.NO.CC.3 Read and write numbers up to 1000 using standard, word, and expanded forms.	- Number Instruction - Number Recognition and Sense	Read and Write Numbers To 1000
2.NO.CC.4 Skip count by 2s and 100s and recognize the patterns of skip counts.	- Songs: Skip Counting - Skip Count - Number Chart - Number Patterns	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Base Ten (NBT) Learners will understand the place value structure of the base-ten number system and represent, compare, and perform operations with multi-digit whole numbers and decimals.		
2.NO.NBT.1 Understand that the three digits of a three-digit number represent a composition of some hundreds, some tens, and some ones.	- Songs: Place Value - Place Value - Place Value of 3-digit Numbers	Thinking of 100 as a Bundle of Ten 10s
2.NO.NBT.2 Compare two three-digit numbers using symbols $>$, $=$,	- Greater Than, Less Than (3-digit Numbers) - Place Value of 3-digit Numbers	Less Than, Equal To, or Greater Than
2.NO.NBT.3 Add within 100 using place value strategies and/or the relationship between addition and subtraction.	- Place Value - Addition and Subtraction Relationship - Addition - Add without Regrouping - Add with Regrouping	Add and Subtract Within 100
2.NO.NBT.4 Subtract within 100 using place value strategies and/or the relationship between addition and subtraction.	- Place Value - Addition and Subtraction Relationship - Subtraction - Subtract without regrouping - Subtract with Regrouping	Add and Subtract Within 100
2.NO.NBT.5 Mentally add or subtract 10 or 100 to or from a given number between 100 and 900.	- Mental Math Games - Skip Count - Place Value - Number Chart - Number Patterns	Mentally Adding or Subtracting 10 or 100
Fractions (NF) Learners will understand fractions and equivalency to represent, compare, and perform operations of fractions and decimals.		
2.NO.NF.1 Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the language of halves, thirds, fourths, half of, a third of, and a fourth of.	- Songs: Fractions - Books: The Fraction Twins; Halves and Fourths and Thirds - Label Parts of Fractions - Fractions of Regions - Fractions of Groups	Fractions

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Fractions (NF) Learners will understand fractions and equivalency to represent, compare, and perform operations of fractions and decimals <i>continued</i>.		
2.NO.NF.2 Recognize that identical wholes can be equally divided in different ways.	- Songs: Fractions - Books: The Fraction Twins; Halves and Fourths and Thirds - Label Parts of Fractions - Fractions of Regions - Fractions of Groups	Fractions
2.NO.NF.3 Recognize that partitioning shapes into more equal shares creates smaller shares.	- Songs: Fractions - Books: The Fraction Twins - Label Parts of Fractions - Fractions of Regions - Fractions of Groups	
Algebraic Reasoning (AR) Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.		
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions.		
2.AR.OA.1 Automatically add and subtract within 20.	- Songs: Fact Families - Addition and Subtraction Relationship - Addition and Subtraction Fact Families - Mental Math	Adding and Subtracting Within 20
2.AR.OA.2 Apply the properties of operations to solve addition and subtraction equations and justify thoughts.	- Songs: Fact Families - Addition and Subtraction Relationship - Addition and Subtraction Fact Families	Add and Subtract Within 100
2.AR.OA.3 Solve one- and two-step authentic word problems with addition within 100.	- Books: Painting by Number - Addition - Missing Addends and Subtrahends - Addition Sentences - Addition and Subtraction Facts	One- and Two-step Word Problems Within 100

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Operations and Algebraic Thinking (OA) Learners will analyze patterns and relationships to generate and interpret numerical expressions <i>continued</i>.		
2.AR.OA.4 Solve one- and two-step authentic word problems with subtraction within 100.	- Books: Circus 20 - Subtraction - Missing Addends and Subtrahends - Subtraction Sentences - Addition and Subtraction Facts	One- and Two-step Word Problems Within 100
2.AR.OA.5 Use repeated addition to find the total number of objects arranged in a rectangular array.	- Addition - Multiply Using Repeated Addition - Multiply Using Arrays	
2.AR.OA.6 Identify a group of objects from 0 to 20 as even or odd by showing even numbers as a sum of two equal parts.	- Songs: Odd Todd and Even Steven - Skip Count by 2 - Addition Facts	Odd and Even Recognition
Geometry and Measurement (GM) Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.		
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane.		
2.GM.G.1 Identify two-dimensional shapes (parallelograms and quadrilaterals).	- Songs: Marmot Shapes; Shapes, Shapes, Shapes; Corners and Sides - Books: The Shape of Things; Imagination Shapes - Simple Shapes - World Shapes	
2.GM.G.2 Identify two-dimensional shapes found within three-dimensional shapes.	- Songs: Corners and Sides; Kites - Books: The Shape of Things; Imagination Shapes - Space Shapes - World Shapes - Geoboard - Tangrams	Draw Shapes

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Geometry (G) Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane <i>continued</i>.		
2.GM.G.3 Compose geometric shapes having specified geometric attributes, such as a given number of edges, angles, faces, vertices, and/or sides.	- Songs: Kites; Corners and Sides - Space Shapes	Draw Shapes
Measurement (M) Learners will represent and calculate measurement data, including time, money, and geometric measurement, and convert like measurement units within a given system.		
2.GM.M.1 Measure the length of an object using two different standard units of measurement. Describe how the two measurements relate to the size of the units chosen.	- Length - Standard Units of Length - Measurement Tools	Measuring the Same Object Two Ways
2.GM.M.2 Estimate and measure to determine how much longer one object is than another, expressing the difference with a standard unit of measurement.	- Length - Standard Units of Length	Measure Length
2.GM.M.3 Tell and write time to the nearest five minutes (including quarter after and quarter to) with a.m. and p.m. using analog and digital clocks.	- 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	Tell and Write Time
2.GM.M.4 Count collections of money (quarters, dimes, nickels, and pennies) relating to counting patterns by 1s, 5s, and 10s up to one dollar.	- Songs: Money - Books: Bugs For Sale - Count Quarters, Dimes, Nickels, and Pennies - Count Dimes, Nickels, and Pennies - Count Nickels and Pennies or Dimes and Pennies - Quarters - Skip Counting	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Data, Probability, and Statistics (DPS) Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic concepts of probability.		
Data (D) Learners will represent and interpret data.		
2.DPS.D.1 Formulate questions to collect, organize, and represent data with up to four categories using a single unit scaled picture and bar graphs.	- Songs: Graphing - Graphing - Bar Graphs - Picture Graphs - Use Graphs and Tables	Graphs
2.DPS.D.2 Generate data and create line plots marked in whole-number units.	Number Line	Data Categorization
2.DPS.D.3 Analyze data and interpret the results to solve one-step comparison problems using information from the graphs.	- Books: Painting By Number - Bar Graphs - Picture Graphs	Graphs
Science		
Kindergarten		
Motion and Stability: Forces and Interactions		
K-PS2-1 Conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	- Songs: Push and Pull - Books: Mr. Mario's Neighborhood - Push and Pull	How It Works
K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	- Songs: Push and Pull - Push and Pull	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Energy		
K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface.	- Songs: Water; Plants Are Growing; Sun Blues - Sun - Water	
K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth's surface.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	Sun and Shade Pictures
From Molecules to Organisms: Structures and Processes		
K-LS1-1 Describe patterns, through observation, of what plants and animals (including humans) need to survive.	- Songs: Water; Food From Plants - Books: Mela's Water Pot; Everybody Needs to Eat - Sun - Plants - Water - Plants and Animals Need Air - Healthy Plants' Needs	Water for Plants Green and Growing
Earth's Systems		
K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.	- Songs: Seasons - Books: That's What I Like: A Book About Seasons - Weather - Calendar/Graph Weather - Weather Patterns - Clouds - Spring - Summer - Fall - Winter	Weather The Weather Around Us Weather Cards
K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change their environment to meet their needs.	- Books: Winter Snoozers; Birds at my House; The Old Maple Tree; Turtle's Pond - Deserts - Mountains	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Earth and Human Activity		
K-ESS3-1 Represent the relationship between the needs of different plants and animals (including humans) and the places they live using a model.	- Songs: Four Ecosystems - Books: Where in the World Would You Go Today? - Oceans - Mountains - Deserts - Rainforests	Our Earth
K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for and respond to weather.	- Songs: Precipitation; Storms - Books: Whatever the Weather - Weather Tools - Calendar/Graph Weather	
K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	- Songs: Conservation; Pollution Rap - Pollution and Recycling - Care of Water - Care of Earth - Care of Air	Recycling Our Earth
Engineering & Technology		
K-2-ET1-1 Ask questions, make observations, and gather information to define a simple problem (a situation people want to change) that can be solved through the development of a new or improved object or tool.	- Songs: Inventing - Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright; I Want to Be a Scientist Like Thomas Edison - Inventions	Recycling Simple Machines
K-2-ET1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	- Books: How Did the Chicken Cross the Road?; Inventions All Around - Simple Machines	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Engineering & Technology <i>continued</i>		
K-2-ET1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	- Books: Warm Soup for Dedushka - Heat Movement - Movement of Heat - Properties of Light - Heat Experiment - Light Experiment	Evaporation
First Grade		
Waves and Their Applications in Technologies for Information Transfer		
1-PS4-1 Plan and conduct investigations to provide evidence that sound can make materials vibrate and that vibrating materials can make sound.	- Songs: Sound - Books: What Sounds Say - Sound Waves	Sound
1-PS4-2 Construct an evidence-based account, through observation, that objects can be seen only when illuminated.	- Books: My Family Campout; Lightning Bugs - Light Properties - Properties of Light	
1-PS4-3 Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	- Books: My Family Campout - Light Properties - Properties of Light	
1-PS4-4 Design and build a device that uses light or sound to solve the problem of communicating over a distance.	- Songs: Inventing - Books: I Want to Be a Scientist Like Thomas Edison; Inventions All Around	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
From Molecules to Organisms: Structures and Processes		
1-LS1-1 Construct an evidence-based argument with the use of a drawing or a model that illustrates how structures of plants or animals help them survive in their habitat.	- Books: I Wish I Had Ears Like a Bat; Animal Bodies; Fawn Eyes - Deserts	
1-LS1-2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	- Songs: Animal Bodies - Animal Behavior - Animal Bodies	
Heredity: Inheritance and Variation of Traits		
1-LS3-1 Construct an evidence-based account, through observation, that young plants and animals are alike, but not exactly like, their parents.	- Books: George and Jack; A Seed Grows - Build Knowledge: Mine	Traits
Earth's Place in the Universe		
1-ESS1-1 Describe patterns that can be predicted through observations of the sun, moon, and stars.	- Songs: The Moon; Sun Blues - Books: Moon Song; Star Pictures; My Family Campout - Sun - Moon - Constellations	The Moon The Sky Above Us
1-ESS1-2 Make observations at different times of the year to relate the amount of daylight to the time of year.	- Sun - Spring - Summer - Fall - Winter	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Engineering & Technology		
K-2-ET1-1 Ask questions, make observations, and gather information to define a simple problem (a situation people want to change) that can be solved through the development of a new or improved object or tool.	- Songs: Inventing - Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright - Inventions	Recycling Simple Machines
K-2-ET1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	- Books: How Did the Chicken Cross the Road?; Inventions All Around - Simple Machines	
K-2-ET1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	- Books: Warm Soup for Dedushka - Heat Movement - Movement of Heat - Heat Experiment	Evaporation
Second Grade		
Matter & Its Interactions		
2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	- Books: Warm Soup for Dedushka - Changes in Matter - States of Water - Materials	
2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	- Books: Warm Soup for Dedushka - Heat Movement - Movement of Heat - Heat Experiment	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Matter & Its Interactions <i>continued</i>		
2-PS1-3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	- Books: I Want to Be a Scientist Like Wilbur and Orville Wright; Inventions All Around - Geoboard - Tangrams	
2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	- Books: Warm Soup for Dedushka; Pancakes Matter - Matter - Changes in Matter - Movement of Heat	
Ecosystems: Interactions, Energy, and Dynamics		
2-LS2-1 Plan an investigation to determine if plants need sunlight and water to grow.	- Songs: Plants Are Growing - Sun - Water - Plant Experiment - Healthy Plants' Needs	Light for Plants
2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	Books: The Bee's Secret; The Old Maple Tree	The Old Maple Tree
Biological Evolution: Unity and Diversity		
2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.	- Songs: Animal Bodies; Four Ecosystems - Books: Animal Bodies; Where in the World Would You Go Today? - Ecosystems - Animal Bodies - Animal Behavior	Places on Earth

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Earth's Place in the Universe		
2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	- Songs: The Four Seasons; Rock Cycle - 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's Systems		
2-ESS2-1 Compare and contrast multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Soil	
2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	- Songs: Water; Precipitation; Water Is All Around - Water Sources - Water - Water Cycle - Care of Water - Oceans	
2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.	- Songs: Water; Uses of Water; Precipitation; Water Is All Around - Water Sources - Water - Water Cycle - Care of Water - States of Water - Heat Changes Water	

North Dakota Standards	Waterford Digital Activities	Waterford Resources
Engineering & Technology		
K-2-ET1-1 Ask questions, make observations, and gather information to define a simple problem (a situation people want to change) that can be solved through the development of a new or improved object or tool.	- Songs: Inventing - Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright - Inventions	Recycling Simple Machines
K-2-ET1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	- Books: How Did the Chicken Cross the Road?; Inventions All Around - Simple Machines	
K-2-ET1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	- Books: Warm Soup for Dedushka - Heat Movement - Movement of Heat - Heat Experiment	Evaporation

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 X1 / Halves and Fourths and Thirds / Navajo Beads / Red Rock, River Rock / I Want to Be a Mathematician Like Srinivasa Ramanujan / The Fraction Twins / Yangshi's Perimeter / I Want to Be a Mathematician Like Archimedes / Birds at My House / Painting by Number / The Fable Fair



Support

Professional Services offers a continuum of customizable services. [Learn more here.](#)

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.

Spanish Family Engagement Resources

All Waterford books and many of the resources available to families at [→family.waterford.org](https://family.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 / O: Polly, Put the Kettle On / P: This Little Pig / Q: Quack, Quack, Quack / R: Little Rabbit / 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 / Charley Chick / 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](https://www.youtube.com/channel/UCq0k11833333333333333333).

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 Family

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