

CURRICULUM *Correlation*

*Waterford Reading
Academy:
Math & Science*

100%

*Michigan
Standards for
Mathematics
2010 & Science
2015*

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

OVERVIEW

This document provides a detailed correlation of **WATERFORD READING ACADEMY: MATH & SCIENCE** *to* **MICHIGAN STANDARDS FOR MATHEMATICS 2010 & SCIENCE 2015.**

CORRELATION DESCRIPTION

This document aligns Michigan Standards for Mathematics 2010 & Science 2015 for Kindergarten, 1st, and 2nd grades to Waterford.org's digital activities and supporting resources.

Waterford Digital Resources

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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MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
MATHEMATICS		
KINDERGARTEN		
Counting and Cardinality (K.CC)		
Know number names and count the sequence.		
K.CC.1 Count to 100 by ones and by tens.	<ul style="list-style-type: none"> • Number Songs • Counting Songs (See titles at end of document.) • Skip Counting • Counting Puzzle 	<ul style="list-style-type: none"> • Count to 100 by ones and tens
K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	<ul style="list-style-type: none"> • Song: Counting On • Count On • Counting Songs (See titles at end of document.) 	<ul style="list-style-type: none"> • Count forward
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	<ul style="list-style-type: none"> • Counting Songs • Number Songs • Math Books (See titles at end of document.) • Number Instruction 	<ul style="list-style-type: none"> • Write numbers 0-20
Count to tell the number of objects.		
K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality. K.CC.4.a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	<ul style="list-style-type: none"> • Counting Songs • Number Songs (See titles at end of document.) • Number Counting • Order Numbers • One-to-one Correspondence • Make and Count Groups • Number Instruction 	<ul style="list-style-type: none"> • Object Counting Basics
K.CC.4.b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Number Instruction • Match Numbers • One-to-One Correspondence 	<ul style="list-style-type: none"> • Object Counting Grouping

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Count to tell the number of objects <i>continued</i>.		
K.CC.4.c Understand that each successive number name refers to a quantity that is one larger.	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence • Order Numbers • Count On by 1 	<ul style="list-style-type: none"> • Object Counting Succession
K.CC.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	<ul style="list-style-type: none"> • Counting Songs • Number Songs (See titles at end of document.) • Make and Count Groups • Number Counting • Number Instruction • Match Numbers • Bug Bits • One-to-one Correspondence 	<ul style="list-style-type: none"> • How many?
Compare numbers.		
K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	<ul style="list-style-type: none"> • Song: Greater Than, Less Than • Book: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make and Count Groups 	<ul style="list-style-type: none"> • Greater, Less, or Equal
K.CC.7 Compare two numbers between 1 and 10 presented as written numerals.	<ul style="list-style-type: none"> • Song: Greater Than, Less Than • Book: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than 	<ul style="list-style-type: none"> • Compare Two Numbers

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Operations and Algebraic Thinking (K.OA)		
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.		
<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p>	<ul style="list-style-type: none"> • Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Make and Count Groups • Add Groups • Subtract Groups • Act Out Addition • Act Out Subtraction • Act Out Subtraction 	<ul style="list-style-type: none"> • Represent Addition and Subtraction with Objects
<p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p>	<ul style="list-style-type: none"> • Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends • Sums • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • Addition and Subtraction Word Problems
<p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).</p>	<ul style="list-style-type: none"> • Make and Count Groups • Add Groups • Subtract Groups • Act Out Subtraction • Subtract Double 	<ul style="list-style-type: none"> • Decompose Numbers
<p>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p>	<ul style="list-style-type: none"> • Missing Addends • Count On • Act Out Addition 	<ul style="list-style-type: none"> • Numbers That Make 10

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i> .		
K.OA.5 Fluently add and subtract within 5.	<ul style="list-style-type: none"> • Songs: Bee Happy Addition; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends • Sums • Act Out Addition • Act Out Subtraction • Act Out Subtraction 	
Number and Operations In Base Ten (K.NBT)		
Work with numbers 11-19 to gain foundations for place value.		
K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	<ul style="list-style-type: none"> • Place Value 	<ul style="list-style-type: none"> • Tens and Ones
Measurement and Data (K.MD)		
Describe and compare measurable attributes.		
K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	<ul style="list-style-type: none"> • Song: Measuring Plants • Length 	<ul style="list-style-type: none"> • Measurable Attributes

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Describe and compare measurable attributes <i>continued</i>.		
<p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.</p>	<ul style="list-style-type: none"> • Songs: Savanna Size, Measuring Plants • Capacity • Length • Order Size • Big and Little • Tall and Short • Heavy and Light 	<ul style="list-style-type: none"> • Comparing Objects
Classify objects and count the number of objects in each category.		
<p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>	<ul style="list-style-type: none"> • Songs: Same and Different; All Sorts of Laundry • Book: Buttons, Buttons • Sort • Make and Count Groups 	<ul style="list-style-type: none"> • Classifying Objects
Geometry (K.G)		
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).		
<p>K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p>	<ul style="list-style-type: none"> • Songs: Position Cat; Kites; Get Over the Bugs; Shapes, Shapes, Shapes • Books: The Shape of Things; Imagination Shapes; Up in the Air • Position • Over, Under, Above, Below • Inside, Outside, Between • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Simple Shapes • Solid Shapes • World Shapes • Above, Below, Next to, On 	<ul style="list-style-type: none"> • Describing Objects

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) <i>continued</i>.		
K.G.2 Correctly name shapes regardless of their orientations or overall size.	<ul style="list-style-type: none"> • Songs: Kites; Shapes, Shapes, Shapes • Books: The Shape of Things; Imagination Shapes; Up in the Air • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Rhombus • Simple Shapes • Solid Shapes • World Shapes 	<ul style="list-style-type: none"> • Shape Recognition
K.G.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).	<ul style="list-style-type: none"> • Solid Shapes • Space Shapes • Simple Shapes 	<ul style="list-style-type: none"> • Two-dimensional Shapes
Analyze, compare, create, and compose shapes.		
K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).	<ul style="list-style-type: none"> • Song: Corners and Sides • Simple Shapes • Solid Shapes • Space Shapes • Congruence • Tangrams • Similar Figures 	<ul style="list-style-type: none"> • Compare Shapes
K.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	<ul style="list-style-type: none"> • Geoboard • Tangrams 	<ul style="list-style-type: none"> • Model Shapes
K.G.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”	<ul style="list-style-type: none"> • Geoboard • Tangrams 	<ul style="list-style-type: none"> • Form Larger Shapes

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
FIRST GRADE		
Operations and Algebraic Thinking (1.OA)		
Represent and solve problems involving addition and subtraction.		
1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	<ul style="list-style-type: none"> • Songs: Fact Families; Doubles • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Doubles • Subtract Doubles 	<ul style="list-style-type: none"> • Word Problems Using Subtraction Within 20
1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	<ul style="list-style-type: none"> • Add 3 One-digit Numbers 	<ul style="list-style-type: none"> • Word Problems Adding 3 Numbers
Understand and apply properties of operations and the relationship between addition and subtraction.		
1.OA.3 Apply properties of operations as strategies to add and subtract. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)	<ul style="list-style-type: none"> • Addition and Subtraction Relationship • Addition and Subtraction Fact Families • Subtraction Patterns • Commutative Property of Addition 	<ul style="list-style-type: none"> • Strategies to Add and Subtract
1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.	<ul style="list-style-type: none"> • Missing Addends • Subtraction Patterns • Addition and Subtraction Fact Families • Make 10 	<ul style="list-style-type: none"> • Understand Subtraction as an Unknown Addend Problem



MICHIGAN STANDARDS FOR MATHEMATICS 2010 & SCIENCE 2015

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Add and subtract within 20.		
<p>1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<ul style="list-style-type: none"> • Song: Counting On • Books: Circus 20; Painting by Number; Jump Rope Rhymes • Skip Count by 2 • Count On • Make and Count Groups • Add Groups • Subtract Groups 	<ul style="list-style-type: none"> • Relate Counting to Addition and Subtraction
<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On • Books: Facts about Families; Circus 20; Painting by Number • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Add 3 One-digit Numbers • Subtraction Patterns 	<ul style="list-style-type: none"> • Add and Subtract Within 20
Work with addition and subtraction equations.		
<p>1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</p>	<ul style="list-style-type: none"> • Song: Fact Families • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Commutative Property of Addition • Addition Sentences • Subtraction Sentences • Greater Than, Less Than • More Than, Fewer Than 	<ul style="list-style-type: none"> • Equal Sign

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
<i>Work with addition and subtraction equations continued.</i>		
1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = [] - 3$, $6 + 6 = []$.	<ul style="list-style-type: none"> Addition Sentences Subtraction Sentences Addition and Subtraction Fact Families Missing Addends Missing Minuends and Subtrahends 	<ul style="list-style-type: none"> Understand Subtraction as an Unknown Addend Problem
Number and Operations in Base Ten (1.NBT)		
<i>Extend the counting sequence.</i>		
1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	<ul style="list-style-type: none"> Song: Counting On Count On Number Chart 	<ul style="list-style-type: none"> Count to 120
<i>Understand place value.</i>		
1.NBT.2 Understand that the two digits of a two-digit number represents amounts of tens and ones. Understand the following as special cases: 1.NBT.2.a 10 can be thought of as a bundle of ten ones—called a “ten.”	<ul style="list-style-type: none"> Song: Place Value Place Value of 2-digit Numbers Expanded Notation 	<ul style="list-style-type: none"> Tens as a Bundle of Ones
1.NBT.2.b The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	<ul style="list-style-type: none"> Song: Place Value Place Value of 2-digit Numbers Expanded Notation 	<ul style="list-style-type: none"> 11-19 Broken Down
1.NBT.2.c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	<ul style="list-style-type: none"> Expanded Notation Place Value Place Value of 2-digit Numbers 	<ul style="list-style-type: none"> Ten Groupings
1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	<ul style="list-style-type: none"> Place Value Greater Than, Less Than (2-digit Numbers) 	<ul style="list-style-type: none"> Compare Two-Digit Numbers

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Use place value understanding and properties of operations to add and subtract.		
<p>1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p>	<ul style="list-style-type: none"> • Addition • Add Tens • Doubles • Doubles Plus 1 • Add with Manipulatives • Add Vertical Squares • Addition and Subtraction Relationship • Add with Regrouping Concept • Add 2-digit and 1-digit Numbers with Regrouping • Add 2-digit Numbers without Regrouping • Add 2-digit Numbers with Regrouping 	<ul style="list-style-type: none"> • Adding Within 100
<p>1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p>	<ul style="list-style-type: none"> • Song: Skip Counting • Book: Navajo Beads • Add • Subtract • Add Tens • Subtract Tens • Skip Count by 10 • Number Chart 	<ul style="list-style-type: none"> • Ten More or Less
<p>1.NBT.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>	<ul style="list-style-type: none"> • Subtraction • Subtract Tens • Subtraction Patterns • Subtract • Place Value • Addition and Subtraction Relationship • Use Manipulatives 	<ul style="list-style-type: none"> • Subtracting in 10s

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Measurement and Data (1.MD)		
Measure lengths indirectly and by iterating length units.		
1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • Order by Length
1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • Length Measurement
Tell and write time.		
1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.	<ul style="list-style-type: none"> • Song: Clock Hands • Books: Mr. Romano’s Secret: A Time Story • Tell Time to the Hour • Tell Time to the Half-Hour • Order Numbers on a Clock 	<ul style="list-style-type: none"> • Hours and Half-Hours
Represent and interpret data.		
1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: Painting by Number; One More Cat; The Booneville Nine • Tally Marks • Graphs • Make a Table 	<ul style="list-style-type: none"> • Data Categorization

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Geometry (1.G)		
Reason with shapes and their attributes.		
<p>1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p>	<ul style="list-style-type: none"> • Songs: Corners and Sides; Kites • Geoboard • Space Shapes 	<ul style="list-style-type: none"> • Attributes
<p>1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.</p>	<ul style="list-style-type: none"> • Song: Kites • Space Shapes • Geoboard • Tangrams 	<ul style="list-style-type: none"> • Form Larger Shapes
<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<ul style="list-style-type: none"> • Song: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me • Equal-part Fractions • Label Parts of Fractions 	<ul style="list-style-type: none"> • Equal Shares

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
SECOND GRADE		
Operations and Algebraic Thinking (2.OA)		
Represent and solve problems involving addition and subtraction.		
2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	<ul style="list-style-type: none"> • Book: Painting by Number • Addition • Subtraction • Missing Addends and Subtrahends • Subtraction Sentences • Addition and Subtraction Facts 	<ul style="list-style-type: none"> • One- and Two-Step Word Problems Within 100
Add and subtract within 20.		
2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers.	<ul style="list-style-type: none"> • Songs: Fact Families; Doubles • Subtraction Patterns • Addition Facts to 20 	<ul style="list-style-type: none"> • Add and Subtract Within 20
Work with equal groups of objects to gain foundations for multiplication.		
2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	<ul style="list-style-type: none"> • Song: Odd Todd and Even Steven • Skip Count by 2 • Addition Facts 	<ul style="list-style-type: none"> • Odd and Even Recognition
2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	<ul style="list-style-type: none"> • Addition • Multiply Using Repeated Addition • Multiply Using Arrays 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Numbers and Operations In Base Ten (2.NBT)		
Understand place value.		
2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: 2.NBT.1.a 100 can be thought of as a bundle of ten tens—called a “hundred.”	<ul style="list-style-type: none"> • Song: Place Value • Place Value • Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> • Thinking of 100 as a Bundle of Ten 10s
2.NBT.1.b The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	<ul style="list-style-type: none"> • Song: Place Value • Place Value • Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> • Grouping Hundreds
2.NBT.2 Count within 1000; skip- count by 5s, 10s, and 100s.	<ul style="list-style-type: none"> • Song: Skip Counting • Skip Count • Skip Count by 10 • Skip Count by 5 • Number Sequences and Patterns 	<ul style="list-style-type: none"> • Counting Within 1000
2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	<ul style="list-style-type: none"> • Sequences of 2-digit Numbers • Sequences of 3-digit Numbers • Number Chart • Place Value • Expanded Notation 	<ul style="list-style-type: none"> • Read and Write Numbers to 1000
2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.	<ul style="list-style-type: none"> • Greater Than, Less Than (3-digit Numbers) • Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> • Less Than, Equal To, or Greater Than

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
<i>Understand place value continued.</i>		
<p>2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	<ul style="list-style-type: none"> • Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction • Add without Regrouping • Add with Regrouping • Subtract without regrouping • Subtract with Regrouping 	<ul style="list-style-type: none"> • Add and Subtract Within 100
<p>2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.</p>	<ul style="list-style-type: none"> • Add Two-digit Numbers with Regrouping • Commutative Properties of Addition • Place Value 	<ul style="list-style-type: none"> • Adding Four 2-Digit Numbers
<p>2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</p>	<ul style="list-style-type: none"> • Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction • Add without Regrouping • Add with Regrouping • Subtract without regrouping • Subtract with Regrouping • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • Add and Subtract Within 1000
<p>2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p>	<ul style="list-style-type: none"> • Skip Count • Place Value • Number Chart • Number Patterns 	<ul style="list-style-type: none"> • Mentally Adding or Subtracting 10 or 100

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
<i>Understand place value continued.</i>		
2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.	<ul style="list-style-type: none"> • Addition • Subtraction • Add with Regrouping Concept • Subtract with Regrouping Concept • Place Value • Number Line • Addition and Subtraction Relationship • Commutative Properties of Addition • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • Explaining Addition and Subtraction Strategies
Measurement and Data (2.MD)		
<i>Measure and estimate lengths in standard units.</i>		
2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	<ul style="list-style-type: none"> • Song: Measuring Plants • Book: Birds at My House • Length • Measurement Tools • Standard Units of Length 	<ul style="list-style-type: none"> • Measurement Tools
2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	<ul style="list-style-type: none"> • Length • Standard Units of Length • Measurement Tools 	<ul style="list-style-type: none"> • Measuring the Same Object Two Ways
2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.	<ul style="list-style-type: none"> • Song: Measuring Plants • Length • Standard Units of Length • Measurement Tools 	<ul style="list-style-type: none"> • Estimating Lengths
2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	<ul style="list-style-type: none"> • Length • Standard Units of Length 	<ul style="list-style-type: none"> • Measure Length

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Relate addition and subtraction to length.		
<p>2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</p>	<ul style="list-style-type: none"> • Book: Yangshi’s Perimeter • Story Problem Strategies • Addition • Subtraction • Length • Standard Units of Length • Perimeter 	<ul style="list-style-type: none"> • One- And Two-Step Word Problems Within 100
<p>2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p>	<ul style="list-style-type: none"> • Number Line • Length 	
Work with time and money.		
<p>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>	<ul style="list-style-type: none"> • Songs: Telling Time; Clock Hands • Tell Time • Tell Time to Five Minutes • Tell Time to the Quarter Hour • Tell Time to the Minute • Tell Time to the Hour • Tell Time to the Half-hour 	<ul style="list-style-type: none"> • Tell and Write Time
<p>2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?</p>	<ul style="list-style-type: none"> • Songs: Money; Save Your Pennies • Book: Bugs For Sale • Coin Identification • Coin Value • Quarters • Count Dimes, Nickels, and Pennies • Count Quarters, Dimes, Nickels, and Pennies • Count Nickels and Pennies or Dimes and Pennies • Make Change • Count Coins • Count Bills and Coins • Equivalent Sums of Money 	<ul style="list-style-type: none"> • Solve Money Word Problems

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Represent and interpret data.		
<p>2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</p>	<ul style="list-style-type: none"> • Measurement Tools • Standard Units of Length 	<ul style="list-style-type: none"> • Generating Measurement Data
<p>2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.</p>	<ul style="list-style-type: none"> • Song: Graphing • Graphing • Bar Graphs • Picture Graphs • Use Graphs and Tables 	<ul style="list-style-type: none"> • Graphs
Geometry (2.G)		
Reason with shapes and their attributes.		
<p>2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p>	<ul style="list-style-type: none"> • Songs: Shapes, Shapes, Shapes; Corners and Sides; Kites • Book: The Shape of Things • Space Shapes • World Shapes • Geoboard 	<ul style="list-style-type: none"> • Draw Shapes
<p>2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p>	<ul style="list-style-type: none"> • Song: Fractions • Fractions of Regions 	
<p>2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<ul style="list-style-type: none"> • Song: Fractions • Books: Halves and Fourths and Thirds; The Fraction Twins • Fractions • Label Parts of Fractions • Geoboard • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
SCIENCE		
KINDERGARTEN		
Forces and Interactions: Pushes and Pulls		
K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	<ul style="list-style-type: none"> • Song: Push and Pull • Book: Mr. Mario’s Neighborhood • Push and Pull 	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Song: Push and Pull • Push and Pull 	
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment		
K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.	<ul style="list-style-type: none"> • 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 • Plant Experiment 	<ul style="list-style-type: none"> • Water for Plants • Green and Growing
K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	<ul style="list-style-type: none"> • Books: Winter Snoozers; Birds at my House; The Old Maple Tree; Turtle’s Pond 	
K-ESS3-1 Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	<ul style="list-style-type: none"> • Song: Four Ecosystems • Book: Where in the World Would You Go Today? • Mountains • Oceans • Deserts • Prairies • Polar Lands • Rainforests • Wetlands 	<ul style="list-style-type: none"> • Our Earth

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment <i>continued</i>		
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.	<ul style="list-style-type: none"> • Songs: Conservation; Pollution Rap • Pollution and Recycling • Care of Water • Care of Earth 	<ul style="list-style-type: none"> • Recycling • Our Earth
Weather and Climate		
K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface.	<ul style="list-style-type: none"> • Book: My Family Campout • Songs: Water; Plants Are Growing; Sun Blues • Sun • Sun, Moon, and Earth 	
K-PS3-2 Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.	<ul style="list-style-type: none"> • Song: Seasons • Book: That's What I Like: A Book About Seasons • Weather • Calendar/Graph Weather • Weather Patterns • Clouds • Spring • Summer • Fall • Winter 	<ul style="list-style-type: none"> • The Weather Around Us • Weather Cards
K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	<ul style="list-style-type: none"> • Songs: Precipitation; Storms • Book: Whatever the Weather • Weather Tools • Calendar/Graph Weather 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Engineering Design		
K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	<ul style="list-style-type: none"> • Song: Inventing • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Inventions 	<ul style="list-style-type: none"> • Recycling • Simple Machines
K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	<ul style="list-style-type: none"> • Books: How Did the Chicken Cross the Road?; Inventions All Around • Simple Machines 	<ul style="list-style-type: none"> • Simple Machines
K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	<ul style="list-style-type: none"> • Book: Warm Soup for Dedushka • Heat Movement • Movement of Heat • Properties of Light • Heat Experiment • Light Experiment 	<ul style="list-style-type: none"> • Evaporation
FIRST GRADE		
Waves: Light and Sound		
1-PS4-1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	<ul style="list-style-type: none"> • Song: Sound • Book: What Sounds Say • Sound Waves 	<ul style="list-style-type: none"> • Sound
1-PS4-2 Make observations to construct an evidence-based account that objects can be seen only when illuminated.	<ul style="list-style-type: none"> • Books: My Family Campout; Lightning Bugs • Light Properties • Properties of Light • Light Experiment 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Waves: Light and Sound <i>continued</i>		
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.	<ul style="list-style-type: none"> • Book: My Family Campout • Light Properties • Properties of Light • Light Experiment 	
1-PS4-4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	<ul style="list-style-type: none"> • Song: Inventing • Books: I Want to Be a Scientist Like Thomas Edison; Inventions All Around 	
Structure, Function, and Information Processing		
1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Song: Animal Bodies • Animal Behavior • Animal Bodies 	
1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	<ul style="list-style-type: none"> • Books: George and Jack; A Seed Grows • Build Knowledge: Mine 	<ul style="list-style-type: none"> • Traits
Space Systems: Patterns and Cycles		
1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.	<ul style="list-style-type: none"> • Songs: The Moon; Sun Blues • Books: Moon Song; Star Pictures; My Family Campout • Sun • Moon • Constellations 	<ul style="list-style-type: none"> • The Moon • The Sky Above Us
1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.	<ul style="list-style-type: none"> • Sun • Spring • Summer • Fall • Winter 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Engineering Design		
<p>K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p>	<ul style="list-style-type: none"> • Song: Inventing • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Inventions 	<ul style="list-style-type: none"> • Recycling • Simple Machines
<p>K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p>	<ul style="list-style-type: none"> • Books: How Did the Chicken Cross the Road?; Inventions All Around • Simple Machines 	
<p>K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>	<ul style="list-style-type: none"> • Book: Warm Soup for Dedushka • Heat Movement • Movement of Heat • Properties of Light • Heat Experiment • Light Experiment 	<ul style="list-style-type: none"> • Evaporation
SECOND GRADE		
Structure and Properties of Matter		
<p>2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p>	<ul style="list-style-type: none"> • Book: Warm Soup for Dedushka • Changes in Matter • Movement of Heat • States of Water • Materials 	
<p>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.</p>	<ul style="list-style-type: none"> • Book: Warm Soup for Dedushka • Heat Movement • Movement of Heat • Heat Experiment 	
<p>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.</p>	<ul style="list-style-type: none"> • Books: I Want to Be a Scientist Like Wilbur and Orville Wright; Inventions All Around • Geoboard • Tangrams 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
<i>Structure and Properties of Matter continued</i>		
2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	<ul style="list-style-type: none"> • Books: Warm Soup for Dedushka; Pancakes Matter • Changes in Matter • Movement of Heat 	
<i>Interdependent Relationships in Ecosystems</i>		
2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.	<ul style="list-style-type: none"> • Song: Plants Are Growing • Sun • Water • Plant Experiment • Healthy Plants' Needs 	<ul style="list-style-type: none"> • Light for Plants
2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	<ul style="list-style-type: none"> • Books: The Bee's Secret; The Old Maple Tree • Plant Life Cycle and Growth 	
2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.	<ul style="list-style-type: none"> • Songs: Animal Bodies; Four Ecosystems • Books: Animal Bodies; Where in the World Would You Go Today? • Ecosystems • Animal Bodies • Animal Behavior • Food Chains • Mountains • Oceans • Deserts • Prairies • Polar Lands • Rainforests • Wetlands 	<ul style="list-style-type: none"> • Places on Earth

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Earth's Systems: Processes that Shape the Earth		
2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	<ul style="list-style-type: none"> • Songs: The Four Seasons; Rock Cycle • Books: That's What I Like: A Book About Seasons; Whatever the Weather; Fossils Under Our Feet • Rock Cycle • Fossils • Spring • Summer • Fall • Winter • Water 	<ul style="list-style-type: none"> • Rocks
2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	<ul style="list-style-type: none"> • Songs: Water; Precipitation; Water Is All Around • Water Sources • Water • Water Cycle • Oceans 	
2-ESS2-2 MI Develop a model to represent the state of Michigan and the Great Lakes, or a more local land area and water body.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.	<ul style="list-style-type: none"> • Songs: Water; Uses of Water; Precipitation; Water Is All Around • Water Sources • Water • Water Cycle • States of Water • Heat Changes Water 	
2-ESS2-3 MI Obtain information to identify where fresh water is found on Earth, including the Great Lakes and Great Lakes Basin.	<ul style="list-style-type: none"> • Songs: Water; Precipitation; Water Is All Around • Water Sources • Water • Water Cycle 	

MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD RESOURCES
Engineering Design		
<p>K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p>	<ul style="list-style-type: none"> • Song: Inventing • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Inventions 	<ul style="list-style-type: none"> • Recycling • Simple Machines
<p>K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p>	<ul style="list-style-type: none"> • Books: How Did the Chicken Cross the Road?; Inventions All Around • Simple Machines 	<ul style="list-style-type: none"> • Simple Machines
<p>K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>	<ul style="list-style-type: none"> • Book: Warm Soup for Dedushka • Heat Movement • Movement of Heat • Properties of Light • Heat Experiment • Light Experiment 	<ul style="list-style-type: none"> • Evaporation

PRE-MATH & SCIENCE

Math Books

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

Science Books

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

Counting Songs

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

Number Songs

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

BASIC MATH & SCIENCE

Math & Science Books

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

FLUENT MATH & SCIENCE

Math & Science Books

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



SUPPORT

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

CONTINUAL DEVELOPMENT

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

SPANISH FAMILY ENGAGEMENT RESOURCES

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

SONGS

Beginning Math Songs

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

Nursery Songs and Rhymes

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

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/UC...).

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).