

CURRICULUM *Correlation*

*Waterford Reading
Academy:
Math & Science*

99%

*Wisconsin
Standards for
Mathematics
2021 & Science
2017*

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

TABLE OF CONTENTS

MATHEMATICS	1
KINDERGARTEN	1
Counting and Cardinality (K.CC).....	1
Operations and Algebraic Thinking (K.OA).....	3
Number and Operations in Base Ten (K.NBT).....	5
Measurement and Data (K.MD).....	6
Geometry (K.G).....	7
GRADE 1	8
Operations and Algebraic Thinking (1.OA).....	8
Number and Operations in Base Ten (1.NBT).....	11
B. Understand place value.....	12
Measurement and Data (1.MD).....	14
Geometry (1.G).....	15
GRADE 2	16
Operations and Algebraic Thinking (2.OA).....	16
Number and Operations in Base Ten (2.NBT).....	18
Measurement and Data (2.MD).....	20
Geometry (2.G).....	23
SCIENCE	24
PATTERNS	24
Standard SCI.CC1: Students use science and engineering practices, disciplinary core ideas, and patterns to make sense of phenomena and solve problems.....	24
CAUSE AND EFFECT	24
Standard SCI.CC2: Students use science and engineering practices, disciplinary core ideas, and cause and effect relationships to make sense of phenomena and solve problems.....	24

SCALE, PROPORTION, AND QUANTITY	25
Standard SCI.CC3: Students use science and engineering practices, disciplinary core ideas, and an understanding of scale, proportion, and quantity to make sense of phenomena and solve problems.....	25
SYSTEMS AND SYSTEM MODELS	25
Standard SCI.CC4: Students use science and engineering practices, disciplinary core ideas, and an understanding of systems and system models to make sense of phenomena and solve problems.....	25
ENERGY AND MATTER	25
Standard SCI.CC5: Students use science and engineering practices, disciplinary core ideas, and an understanding of energy and matter to make sense of phenomena and solve problems.....	25
STRUCTURE AND FUNCTION	26
Standard SCI.CC6: Students use science and engineering practices, disciplinary core ideas, and an understanding of structure and function to make sense of phenomena and solve problems.....	26
STABILITY AND CHANGE	26
Standard SCI.CC7: Students use science and engineering practices, disciplinary core ideas, and an understanding of stability and change to make sense of phenomena and solve problems.....	26
SCIENCE AND ENGINEERING PRACTICES (SEP)	26
Asking Questions and Defining Problems.....	26
DEVELOPING AND USING MODELS	27
Standard SCI.SEP2: Students develop and use models, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	27
PLANNING AND CONDUCTING INVESTIGATIONS	28
Standard SCI.SEP3: Students plan and conduct investigations, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	28

TABLE OF CONTENTS

ANALYZE AND INTERPRET DATA	29	PHYSICAL SCIENCE 2 (PS2)	38
Standard SCI.SEP4: Students analyze and interpret data, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	29	Forces, Interactions, Motion, and Stability	38
MATHEMATICS AND COMPUTATIONAL THINKING	30	PHYSICAL SCIENCE 3 (PS3)	39
Standard SCI.SEP5: Students use mathematics and computational thinking, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	30	Energy	39
CONSTRUCT EXPLANATIONS AND DESIGN SOLUTIONS	30	PHYSICAL SCIENCE 4 (PS4)	39
Standard SCI.SEP6: Students construct explanations and design solutions, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	30	Waves and Their Applications in Technologies for Information Transfer	39
ENGAGE IN ARGUMENT FROM EVIDENCE	32	EARTH AND SPACE SCIENCE 1 (ESS1)	40
Standard SCI.SEP7: Students engage in argument from evidence, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	32	Earth's Place in the Universe	40
OBTAIN, EVALUATE, AND COMMUNICATE INFORMATION	33	EARTH AND SPACE SCIENCE 2 (ESS2)	42
Standard SCI.SEP8: Students obtain, evaluate, and communicate information, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.....	33	Earth's Systems.	42
LIFE SCIENCE 1 (LS1)	34	EARTH AND SPACE SCIENCE 3 (ESS3)	44
Structures and Processes	34	Earth and Human Activity	44
LIFE SCIENCE 2 (LS2)	35	ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 1 (ETS)	45
Interactions, Energy, and Dynamics Within Ecosystems	35	Engineering Design	45
LIFE SCIENCE 3 (LS3)	36	ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 2 (ETS2)	47
Heredity	36	Links Among Engineering, Technology, Science, and Society	47
PHYSICAL SCIENCE 1 (PS1)	37	ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 3 (ETS3)	48
Matter and Its Interactions	37	Nature of Science and Engineering	48
		WATERFORD BOOKS AND RELATED ACTIVITIES	50
		WATERFORD FAMILY ENGAGEMENT RESOURCES	51

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MATHEMATICS		
KINDERGARTEN		
Counting and Cardinality (K.CC)		
A. Know number names and the count sequence.		
<p>M.K.CC.A.1 Count to 100 by ones and by tens.</p>	<ul style="list-style-type: none"> • Counting Songs (See titles at end of document.) • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames • Skip Counting 	<ul style="list-style-type: none"> • Count to 100 by ones and tens.pdf: Count to 100 by ones and tens. <ul style="list-style-type: none"> - Missing Numbers - Count On By 1 - Numbers 1-5; 6-10 - Count By 10s - Numbers 60-69 - I Can Count to 100
<p>M.K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p>	<ul style="list-style-type: none"> • Counting Songs (See titles at end of document.) • Count On • Counting Puzzle 	<ul style="list-style-type: none"> • Count forward.pdf: Count forward beginning with a given number within the known sequence. <ul style="list-style-type: none"> - Let's Count On - Toss and Count - Count On by 1 - Math Newsletter: Count On - Flashcards
<p>M.K.CC.A.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).</p>	<ul style="list-style-type: none"> • Counting Songs (See titles at end of document.) • Number Tracing • Object Counting • Count with 5-Frames 	<ul style="list-style-type: none"> • Write numbers 0-20.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral. <ul style="list-style-type: none"> - Numbers Practice - Numbers - Add groups - Count on by 1 - Number Writing Practice

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Tell the number of objects.		
<i>M.K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality</i>		
<p>M.K.CC.B.4a 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 (one to one correspondence).</p>	<ul style="list-style-type: none"> • Number _ Counting (e.g., Number 2 Counting) • Order Numbers • One-to-one Correspondence • Make and Count Groups • Finger Counting • Object Counting • Count with 5-Frames 	<ul style="list-style-type: none"> • Object Counting Basics.pdf: When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. <ul style="list-style-type: none"> - Number Walk
<p>M.K.CC.B.4b Understand that the last number name said tells the number of objects counted (cardinality). The number of objects is the same regardless of their arrangement or the order in which they were counted (number conservation).</p>	<ul style="list-style-type: none"> • Make and Count Groups • Finger Counting • Object Counting • Count with 5-Frames • Number _ Counting (e.g., Number 2 Counting) 	<ul style="list-style-type: none"> • Object Counting Grouping.pdf: Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. <ul style="list-style-type: none"> - Mixed Up Counting
<p>M.K.CC.4c Understand that each successive number name refers to a quantity that is one larger and the previous number is one smaller (hierarchical inclusion).</p>	<ul style="list-style-type: none"> • Make and Count Groups • Number _ Counting (e.g., Number 2 Counting) • One-to-One Correspondence • Count On by 1 	<ul style="list-style-type: none"> • Object Counting Succession.pdf: Understand that each successive number name refers to a quantity that is one larger. <ul style="list-style-type: none"> - One by One
<p>M.K.CC.B.5 Quickly recognize and name the quantity of up to 5 objects briefly shown in structured or unstructured arrangements without counting (perceptual subitizing).</p>	<ul style="list-style-type: none"> • Moving Target (Dots) • Bug Bits • Dominoes 	
<p>M.K.CC.B.6 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.</p>	<ul style="list-style-type: none"> • Counting Songs (See titles at end of document.) • Make and Count Groups • Number _ Counting (e.g., Number 2 Counting) • Finger Counting • Object Counting • Count with 5-Frames • One-to-one Correspondence 	<ul style="list-style-type: none"> • How many?.pdf: Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects. <ul style="list-style-type: none"> - Hoop Addition

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
C. Compare numbers.		
<p>M.K.CC.C.7 Identify whether the number of objects (up to 10) 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.</p>	<ul style="list-style-type: none"> • Book: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make and Count Groups 	<ul style="list-style-type: none"> • Greater, less, or equal.pdf: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. <ul style="list-style-type: none"> - Beans and More - More Than Buttons - Short Names, Long Names - Noodle Necklaces - Groups Do Count! - More Than, Fewer Than, Equal - Which Has More? - Fewer Than - More or Fewer - Greater or Less
<p>Compare two numbers between 1 and 10 presented as written numerals using student generated ways to record the comparison.</p>	<ul style="list-style-type: none"> • 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.pdf: Compare two numbers between 1 and 10 presented as written numerals. <ul style="list-style-type: none"> - More or Less Spinner - Catch Me If You Can! - Greater or Less - Less or Greater
Operations and Algebraic Thinking (K.OA)		
A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.		
<p>M.K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, or numbers. Drawings need not show details, but should show the mathematics in the problem.</p>	<ul style="list-style-type: none"> • Songs: 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 	<ul style="list-style-type: none"> • Represent addition and subtraction with objects. pdf: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations. <ul style="list-style-type: none"> - Addition Cubes - Addition Stories - Going Fishing - Let's Count On - Act it out Stories - Manipulative Stories

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i> .		
<p>M.K.OA.A.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: 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.pdf: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. <ul style="list-style-type: none"> - Additions Stories - Act It Out Stories - Manipulative Stories - Edible Stories - One, Two, Three, Show - Circus Subtraction - Partner Subtraction - Farmer’s Market - Green and Speckled Frogs - Cars and Trucks Subtraction - Yummy Subtraction - Act Out Addition - Act Out Subtraction
M.K.OA.A.3 Compose and decompose quantities within 10		
<p>M.K.OA.A.3a a. 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 with drawings or numbers.</p>	<ul style="list-style-type: none"> • Make and Count Groups • Add Groups • Subtract Groups • Act Out Subtraction 	<ul style="list-style-type: none"> • Decompose numbers.pdf: Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation. <ul style="list-style-type: none"> - Addition Cubes - Fact Families
<p>M.K.OA.A.3b Quickly name the quantity of objects briefly shown in structured arrangements anchored to 5 (e.g., fingers, ten frames, math rack/rekenrek) with totals up to 10 without counting by recognizing the arrangement or seeing the quantity in subgroups that are combined (conceptual subitizing).</p>	<ul style="list-style-type: none"> • Moving Target (Dots) • Bug Bits • Dominoes 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
M.K.OA.A.3 Compose and decompose quantities within 10 <i>continued</i>		
M.K.OA.A.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 numbers.	<ul style="list-style-type: none"> • Make 10 • Missing Addends • Count On • Act Out Addition 	<ul style="list-style-type: none"> • Numbers that make 10.pdf: For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. <ul style="list-style-type: none"> - How Many More?
M.K.OA.A.5 Flexibly and efficiently add and subtract within 5 using mental images and composing/decomposing numbers up to 5.	<ul style="list-style-type: none"> • Songs: 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 	
Number and Operations in Base Ten (K.NBT)		
A. Work with numbers 11-19 to gain foundations for place value.		
M.K.NBT.A.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 numbers; 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.pdf: Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation; understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. <ul style="list-style-type: none"> - Place Value 11-19

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Data (K.MD)		
A. Describe and compare measurable attributes.		
<p>M.K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p>	<ul style="list-style-type: none"> • Song: Measuring Plants • Length 	<ul style="list-style-type: none"> • Measurable attributes.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. <ul style="list-style-type: none"> - Filling Table - Order It Up - Straw Rulers - Measuring Walk - Heavy or Light - Make A Balance - Measurable Attributes
<p>M.K.MD.A.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 • Big and Little • Tall and Short • Heavy and Light • Size 	<ul style="list-style-type: none"> • Comparing objects.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. <ul style="list-style-type: none"> - Filling Table - Order It Up - Straw Rulers - Measuring Walk - Heavy or Light - Make A Balance - Size Scavenger Hunt - Big and Little Sort - Boxes in a Line - Teddy Bear Line-Up - Magazine Sorting - Tall and Short
<p>M.K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10.</p>	<ul style="list-style-type: none"> • Songs: Same and Different; All Sorts of Laundry • Book: Buttons, Buttons • Sort 	<ul style="list-style-type: none"> • Classifying objects.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. <ul style="list-style-type: none"> - Let’s Sort - Sort

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Geometry (K.G)		
A. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)		
<p>M.K.G.A.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.pdf: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. <ul style="list-style-type: none"> - Shapes Scavenger Hunt
<p>M.K.G.A.2 Correctly name shapes regardless of their orientations or overall size.</p>	<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.pdf: Correctly name shapes regardless of their orientations or overall size. <ul style="list-style-type: none"> - Shapes Scavenger Hunt - Shapes and Positioning - Shapes Flashcards
<p>M.K.G.A.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).</p>	<ul style="list-style-type: none"> • Solid Shapes • Space Shapes • Simple Shapes 	<ul style="list-style-type: none"> • Two-dimensional shapes.pdf: Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). <ul style="list-style-type: none"> - Shapes and Positioning

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Analyze, compare, create, and compose shapes.		
<p>M.K.G.B.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).</p>	<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.pdf: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). <ul style="list-style-type: none"> - Comparing Shapes
<p>M.K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p>	<ul style="list-style-type: none"> • Geoboard • Tangrams 	<ul style="list-style-type: none"> • Model shapes.pdf: 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"> - Building Shapes
<p>M.K.G.B.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</p>	<ul style="list-style-type: none"> • Geoboard • Tangrams 	<ul style="list-style-type: none"> • Form larger shapes.pdf: Compose simple shapes to form larger shapes. <ul style="list-style-type: none"> - Combining Shapes
GRADE 1		
Operations and Algebraic Thinking (1.OA)		
A. Represent and solve problems involving addition and subtraction.		
<p>M.1.OA.A.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.</p>	<ul style="list-style-type: none"> • Song: Fact Families • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship 	<ul style="list-style-type: none"> • Word problems using subtraction within 20.pdf: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. <ul style="list-style-type: none"> - Guess and Check - Model the Story

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
A. Represent and solve problems involving addition and subtraction <i>continued</i>.		
<p>M.1.OA.A.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.</p>	<ul style="list-style-type: none"> Add 3 One-digit Numbers 	<ul style="list-style-type: none"> Word problems adding 3 numbers.pdf: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. <ul style="list-style-type: none"> Draw a Picture
B. Understand and apply properties of operations and the relationship between addition and subtraction.		
<p>M.1.OA.B.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. (Informal use of the commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Informal use of the associative property of addition.)</p>	<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.pdf: Apply properties of operations as strategies to add and subtract. <ul style="list-style-type: none"> Adding and Subtracting Bugs Concentration Related Facts
<p>M.1.OA.B.4 Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.</p>	<ul style="list-style-type: none"> Missing Addends Subtraction Patterns Addition and Subtraction Fact Families 	<ul style="list-style-type: none"> Understand subtraction as an unknown addend problem.pdf: Understand subtraction as an unknown-addend problem. Add and subtract within 20. <ul style="list-style-type: none"> Write each subtraction problem as an addition problem and solve it.
C. Add and subtract within 20.		
<i>M.1.OA.C.5 Use counting and subitizing strategies to explain addition and subtraction.</i>		
<p>M.1.OA.C.5a 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 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.pdf: Relate counting to addition and subtraction. <ul style="list-style-type: none"> Skip Counting Chant Jump Rope Counting Related Facts Count by 2s; 5s; 10s

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>M.1.OA.C.5 Use counting and subitizing strategies to explain addition and subtraction continued.</i>		
<p>M.1.OA.C.5b Use conceptual subitizing in unstructured arrangements with totals up to 10 and structured arrangements anchored to 5 or 10 (e.g., 10 frames, double ten frames, math rack/rekenrek) with totals up to 20 to relate the compositions and decompositions to addition and subtraction.</p>	<ul style="list-style-type: none"> • Moving Target (Dots) • Bug Bits • Dominoes 	
<i>M.1.OA.C.6 Use multiple strategies to add and subtract within 20.</i>		
<p>M.1.OA.C.6a Flexibly and efficiently add and subtract within 10 using strategies that may include mental images and composing/decomposing up to 10.</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 • Subtraction Patterns 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - The Three Little Bears - Fact Family Bingo - A Graph of Fact Families - Bean Facts - Draw a Picture - Addition - Number Pyramid - Subtraction Sentences - Model the Story - Fact Families

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>M.1.OA.C.6 Use multiple strategies to add and subtract within 20 continued.</i>		
<p>M.1.OA.C.6b Add and subtract within 20 using objects, drawings or equations. Use multiple strategies that may include counting on; making a 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 • Subtraction Patterns 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - The Three Little Bears - Fact Family Bingo - A Graph of Fact Families - Bean Facts - Draw a Picture - Addition - Number Pyramid - Subtraction Sentences - Model the Story - Fact Families
<i>D. Work with addition and subtraction equations.</i>		
<p>Understand the meaning of the equal sign as “has the same value/ amount as” 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.pdf: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <ul style="list-style-type: none"> - Show Me! - Tricky Total - Domino Addition - Domino Subtraction - Playground Fact Snake
Number and Operations in Base Ten (1.NBT)		
A. Extend the counting sequence		
<p>M.1.NBT.A.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.</p>	<ul style="list-style-type: none"> • Song: Counting On • Count On • Number Chart 	<ul style="list-style-type: none"> • Count to 120.pdf: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. <ul style="list-style-type: none"> - Mystery Numbers - I Can Write Numbers to 99 - Numbers 20-29; 30-39; 40-49; 50-59; 60-69 - Counting to 89 - Counting Charts: - I Can Count to 50; 100; 99; 120

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Understand place value.		
M.1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:		
M.1.NBT.B.2a 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 	<ul style="list-style-type: none"> • Tens as a bundle of ones.pdf: 10 can be thought of as a bundle of ten ones—called a "ten." <ul style="list-style-type: none"> - Popsicles to Ten
M.1.NBT.B.2b 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 	<ul style="list-style-type: none"> • 11-19 broken down.pdf: 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"> - Toss It - Make a Number - Numbers Flashcards - Numbers 10-19 - More Numbers 10-19
M.1.NBT.B.2c 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.pdf: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). <ul style="list-style-type: none"> - Toss It
M.1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits and describe the result of the comparison using words and 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.pdf: Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$. <ul style="list-style-type: none"> - More or Less Spinner - Catch Me if You Can! - What Are You Looking For? - Two-Pile Sort

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
C. Use place value understanding and properties of operations to add and subtract.		
<p>M.1.NBT.C.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 • 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 • Add 2-digit Numbers without Regrouping • Add 2-digit Numbers with Regrouping 	<ul style="list-style-type: none"> • Adding within 100.pdf: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). <ul style="list-style-type: none"> - Drawing Tens - Beans, Beans, and More Beans - The Kingdom of Popsicle Stick-Filled Purses - Straws and Macaroni - Bean Addition - Adding Tens and Ones - Color Adds Up - Cookies and Milk! - Addition of Two-Digit Numbers - Addition and Subtraction of Large Numbers
<p>M.1.NBT.C.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 • Add Tens • Subtract Tens • Skip Count by 10 • Number Chart 	<ul style="list-style-type: none"> • Ten more or less.pdf: Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. <ul style="list-style-type: none"> - Ten-O - Toss It - Make a Number - Subtract 10 - Bingo - Addition of Tens
<p>M.1.NBT.C.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.pdf: Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90. <ul style="list-style-type: none"> - Ten-O - Bingo - Subtract Multiples of 10

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measurement and Data (1.MD)		
A. Measure lengths indirectly and by iterating length units.		
<p>M.1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p>	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • Order by length.pdf: Order three objects by length; compare the lengths of two objects indirectly by using a third object. <ul style="list-style-type: none"> - Estimating Length - A Fruit and Vegetable Measure
<p>M.1.MD.A.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.</p>	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • Length Measurement.pdf: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <ul style="list-style-type: none"> - Measures of Me - Measure a Handful - Estimating Length - A Fruit and Vegetable - Measure Up! - Inches/Centimeters Rulers
B. Tell and write time		
<p>M.1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.</p>	<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 	<ul style="list-style-type: none"> • Hours and half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks. <ul style="list-style-type: none"> - What Comes After, Before, Or Between? - Make Your Own Clock - Learning to Tell Time - Matching Time - What Numbers Are Missing? - What Time Is It? - Time of Day

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
C. Represent and interpret data.		
<p>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.</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: Painting by Number; One More Cat • Tally Marks • Graphs • Make a Table 	<ul style="list-style-type: none"> • Data Categorization.pdf: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. <ul style="list-style-type: none"> - Ice-Cream Sundae - Make a Real Object Graph - Make a Weather Bar Graph - Weather Flashcards - Our Favorite Foods - Make a Graph - Make a Table - How Many? - Bugs! - Use Graphs and Tables - How Big Is Your Family?
Geometry (1.G)		
A. Reason with shapes and their attributes.		
<p>M.1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus nondefining 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.pdf: Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes. <ul style="list-style-type: none"> - Sorting Shapes
<p>M.1.G.A.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. Student use of formal names such as “right rectangular prism” is not expected.</p>	<ul style="list-style-type: none"> • Song: Kites • Space Shapes • Geoboard • Tangrams 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
A. Reason with shapes and their attributes <i>continued</i>.		
<p>M.1.G.A.3 Partition circles and rectangles into two and four equal shares, describe and count the shares using the words halves and fourths, and use the phrases half of and fourth of the whole. Describe the whole as being two of the shares, 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 • Book: Halves and Fourths and Thirds • Equal-part Fractions • Label Parts of Fractions 	<ul style="list-style-type: none"> • Equal shares.pdf: Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. <ul style="list-style-type: none"> - Make It Equal - Fraction Friends - Fraction Train - Halves, Thirds, Fourths - Equal Parts
GRADE 2		
Operations and Algebraic Thinking (2.OA)		
A. Represent and solve problems involving addition and subtraction.		
<p>M.2.OA.A.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.</p>	<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. pdf: Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. <ul style="list-style-type: none"> - Animal Math - Picture Problems - Color the Chart - Think About it Differently - Act it Out - Guess and Check

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Add and subtract within 20.		
<p>M.2.OA.B.2 Flexibly and efficiently add and subtract within 20 using multiple mental strategies which may include counting on; making ten; decomposing a number leading to a ten; 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; Doubles • Count On • Make 10 • Subtraction Patterns • Addition and Subtraction Relationship 	<ul style="list-style-type: none"> • Add and subtract within 20.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <ul style="list-style-type: none"> - The Three Little Bears - Fact Family Bingo - A Graph of Fact Families - Bean Facts - Draw a Picture - Addition - Number Pyramid - Subtraction Sentences - Model the Story - Fact Families - Add _ and 1-5; _ and 6-10 - Order Property of Addition - Add Doubles +1 to 11 - Add Doubles to 20 - Add Doubles +1 to 21 - Make 10 - Subtract _ from - Subtract - Subtraction Patterns - Fact Families to 10; to 20 - Add and Subtract Doubles to 10; Doubles to 20
C. Work with equal groups of objects to gain foundations for multiplication.		
<p>M.2.OA.C.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.</p>	<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.pdf: Determine whether a group of objects (up to 20) has an odd or even number of members. <ul style="list-style-type: none"> - Missing Patterns - Counting by 2s - What's My Number?
<p>M.2.OA.C.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.</p>	<ul style="list-style-type: none"> • Addition • Multiply Using Repeated Addition • Multiply Using Arrays 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Number and Operations in Base Ten (2.NBT)		
A. Understand place value.		
<i>M.2.NBT.A.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:</i>		
M.2.NBT.A.1a 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 of 3-digit Numbers 	<ul style="list-style-type: none"> • Thinking of 100 as a bundle of ten 10s.pdf: 100 can be thought of as a bundle of ten tens—called a “hundred.” <ul style="list-style-type: none"> - The Kingdom of Popsicle Stick-Filled Purses
M.2.NBT.A.1b 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 of 3-digit Numbers 	<ul style="list-style-type: none"> • Grouping hundreds: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). <ul style="list-style-type: none"> - My Three-Digit Numbers
M.2.NBT.A.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.pdf: Count within 1,000; skip-count by 5s, 10s, and 100s. <ul style="list-style-type: none"> - Chart Patterns • My 199 Picture; 200 Picture; 299 Picture; 300 Picture; 399 Picture; 400 Picture; 499 Picture; 500 Picture; 599 Picture; 600 Picture; 699 Picture; 700 Picture <ul style="list-style-type: none"> - 900 Chart
M.2.NBT.A.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.pdf: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. <ul style="list-style-type: none"> - Cube Trails - Race for a Flat - High/Low Number Cube Throw - Lucky Five
M.2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, and describe the result of the comparison using words and symbols (>, =, and <).	<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.pdf: Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. <ul style="list-style-type: none"> - More or Less - The Hands Have It! - Larger or Smaller? - Comparing Number Cards - Number Cards - <,>, = Cards - Greater Than, Less Than, Equal To

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Use place value understanding and properties of operations to add and subtract.		
<p>M.2.NBT.B.5 Flexibly and efficiently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. In Grade 2, subtraction with decomposition is an exception and may include drawings/representations.</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.pdf: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. <ul style="list-style-type: none"> - Addition of Two-Digit Numbers - Tic Tac Toe - Subtraction of Two-Digit Numbers
<p>M.2.NBT.B.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.pdf: Add up to four two-digit numbers using strategies based on place value and properties of operations. <ul style="list-style-type: none"> - Add Four Two-Digit Numbers
<p>M.2.NBT.B.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.pdf: Add and subtract within 1,000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. <ul style="list-style-type: none"> - Choose and Add - Mix and Match Addition - Expanded Subtraction - Subtracting Repeats - 999 - Prediction - Up and Away - Regrouping Treasure Hunt - Play Ball - Squirrel Facts - Number Cards

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
B. Use place value understanding and properties of operations to add and subtract <i>continued</i>.		
M.2.NBT.B.8 Mentally add 10 or 100 to a given number 100 - 900, and mentally subtract 10 or 100 from a given number 100 - 900.	<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.pdf: Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. <ul style="list-style-type: none"> - Spin and Solve
M.2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. These explanations may be supported by drawings or objects.	<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 	
Measurement and Data (2.MD)		
A. Measure and estimate lengths in standard units.		
M.2.MD.A.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.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. <ul style="list-style-type: none"> - Ready, Set, Measure - Treasure Hunt - Centimeter Ruler - Inch Ruler - Let’s Measure in Centimeters! - Let’s Measure in Inches!
M.2.MD.A.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.pdf: Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. <ul style="list-style-type: none"> - Ready, Set, Measure

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
A. Measure and estimate lengths in standard units.		
M.2.MD.A.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.pdf: Estimate lengths using units of inches, feet, centimeters, and meters. <ul style="list-style-type: none"> - Ready, Set, Measure - Treasure Hunt - Let's Measure in Centimeters! - Let's Measure in Inches! - Measuring Perimeter
M.2.MD.A.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.pdf: 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"> - Ready, Set, Measure - Treasure Hunt
B. Relate addition and subtraction to length.		
M.2.MD.B.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 number lines) and equations with a symbol for the unknown number to represent the problem.	<ul style="list-style-type: none"> • Book: Yangshi's Perimeter • Addition • Subtraction • Length • Standard Units of Length 	<ul style="list-style-type: none"> • Add and subtract word problems within 100. pdf: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. <ul style="list-style-type: none"> - Perimeter Walkabout - How Far Around? - Measuring Perimeter
M.2.MD.B.6 Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to the numbers 0, 1, 2 ... and represent whole-number sums and differences within 100 on a number line.	<ul style="list-style-type: none"> • Number Line • Length 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
C. Work with time and money.		
<p>M.2.MD.C.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.pdf: Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. <ul style="list-style-type: none"> - Matching Clocks - Cartoon Captions - Time to 5 Minutes
<p>M.2.MD.C.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.pdf: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. <ul style="list-style-type: none"> - Supermarket Hunt - Shopping for My Family - Money Combinations - Money Sums - Pizza Parlor - How Much Back? - Coin Count - Bills and Coins - Let's Count Coins - Money Addition - Change is Good! - Make 45¢
D. Represent and interpret data.		
<p>M.2.MD.D.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 	<ul style="list-style-type: none"> • Generating measurement data.pdf: 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. <ul style="list-style-type: none"> - Measuring Inches - Ready, Set, Measure - Let's Measure in Centimeters! - Let's Measure in Inches!

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
D. Represent and interpret data <i>continued</i>.		
<p>M.2.MD.D.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.pdf: Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. <ul style="list-style-type: none"> - Questions and Answers - Library Book Survey - Playground Survey - Rock Collections - Use Graphs and Tables
Geometry (2.G)		
A. Reason with shapes and their attributes.		
<p>M.2.G.A.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. Sizes are compared directly or visually, not compared by measuring.</p>	<ul style="list-style-type: none"> • Songs: Shapes, Shapes, Shapes; Corners and Sides; Kites • Book: The Shape of Things • Geoboard • Space Shapes • World Shapes 	<ul style="list-style-type: none"> • Draw shapes.pdf: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. <ul style="list-style-type: none"> - Making Shapes - Shapes Review
<p>M.2.G.A.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>M.2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe and count the shares using the words halves, thirds, and fourths, and use phrases half of, a third of, and a fourth of the whole. Describe the whole as composed of two halves, three thirds, and 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 • Fractions of Regions • Fractions of Groups 	<ul style="list-style-type: none"> • Fractions.pdf: Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. <ul style="list-style-type: none"> - Frenzied Fraction Fun - Fabulous Fractions

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SCIENCE		
PATTERNS		
Standard SCI.CC1: Students use science and engineering practices, disciplinary core ideas, and patterns to make sense of phenomena and solve problems.		
CC1: Patterns		
<p>SCI.CC1.K-2 Students recognize that patterns in the natural and human-designed world can be observed, used to describe phenomena, and used as evidence.</p>	<ul style="list-style-type: none"> • Song: Five Senses • Book: I Wish I Had Ears Like a Bat • Science Investigation • Sight • Smell • Taste • Touch • Hearing • Gravity • Air • Water • Weather Patterns • Changes in Matter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The World Around Us
CAUSE AND EFFECT		
Standard SCI.CC2: Students use science and engineering practices, disciplinary core ideas, and cause and effect relationships to make sense of phenomena and solve problems.		
CC2: Cause and Effect		
<p>SCI.CC2.K-2 Students learn that events have causes that generate observable patterns. They design simple tests to gather evidence to support or refute their own ideas about causes.</p>	<ul style="list-style-type: none"> • Book: Pancakes Matter • Science Investigation • Changes in Matter • Matter Experiment 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Solids, Liquids, and Gases

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SCALE, PROPORTION, AND QUANTITY		
Standard SCI.CC3: Students use science and engineering practices, disciplinary core ideas, and an understanding of scale, proportion, and quantity to make sense of phenomena and solve problems.		
CC3: Scale, Proportion, and Quantity		
SCI.CC3.K-2 Students use relative scales (e.g., bigger and smaller, hotter and colder, faster and slower) to describe objects. They use standard units to measure length.	<ul style="list-style-type: none"> • Songs: Savanna Size; Measuring Plants • Books: Birds at My House; I Want to Be a Mathematician Like Archimedes • Science Tools • Big and Little • Large Small Toys • Size • Standard Units of Length 	Engagement: <ul style="list-style-type: none"> • Learning Together: Size; Measurement; Temperature
SYSTEMS AND SYSTEM MODELS		
Standard SCI.CC4: Students use science and engineering practices, disciplinary core ideas, and an understanding of systems and system models to make sense of phenomena and solve problems.		
CC4: Systems and System Models		
SCI.CC4.K-2 Students understand objects and organisms can be described in terms of their parts and that systems in the natural and designed world have parts that work together.	<ul style="list-style-type: none"> • Books: Animal Bodies; Inventions All Around • Functions of Plant Parts • Simple Machines • Inventions 	Engagement: <ul style="list-style-type: none"> • Learning Together: Inventions • HomeLink: Naming Parts of the Body
ENERGY AND MATTER		
Standard SCI.CC5: Students use science and engineering practices, disciplinary core ideas, and an understanding of energy and matter to make sense of phenomena and solve problems.		
CC5: Energy and Matter		
SCI.CC5.K-2 Students observe objects may break into smaller pieces, be put together into larger pieces, or change shapes.	<ul style="list-style-type: none"> • Book: Half for You and Half for Me • Tangrams • Equal-Part Fractions 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
STRUCTURE AND FUNCTION		
Standard SCI.CC6: Students use science and engineering practices, disciplinary core ideas, and an understanding of structure and function to make sense of phenomena and solve problems.		
CC6: Structure and Function		
SCI.CC6.K-2 Students observe the shape and stability of structures of natural and designed objects are related to their function(s).	<ul style="list-style-type: none"> • Books: I Want to Be a Scientist Like Wilbur and Orville Wright; Amazing Tails; Animal Bodies; How Did the Chicken Cross the Road? • Functions of Plant Parts • Simple Machines 	<ul style="list-style-type: none"> • More to Explore: Simple Machines
STABILITY AND CHANGE		
Standard SCI.CC7: Students use science and engineering practices, disciplinary core ideas, and an understanding of stability and change to make sense of phenomena and solve problems.		
CC7: Stability and Change		
SCI.CC7.K-2 Students observe some things stay the same while other things change, and things may change slowly or rapidly.	<ul style="list-style-type: none"> • Song: Seasons • Books: That’s What I Like: A Book About Seasons • Heat Changes Water • Changes in Matter • Weather Patterns 	
SCIENCE AND ENGINEERING PRACTICES (SEP)		
Asking Questions and Defining Problems		
Standard SCI.SEP1: Students ask questions and define problems, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP1.A: Asking Questions		
SCI.SEP1.A.K-2 Students ask simple descriptive questions that can be tested. This includes the following: Ask questions based on observations to find more information about the natural world. <ul style="list-style-type: none"> • Ask or identify questions that can be answered by an investigation. 	<ul style="list-style-type: none"> • Book: I Want to Be a Scientist Like Jane Goodall • Science Investigation • Experiments: Air; Density; Buoyancy; Ecosystems; Health; Heat; Light; Matter; Plant; Pollution 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SEP1.B: Defining Problems</i>		
SCI.SEP1.B.K-2 Students define simple problems that can be solved through the development of a new or improved object or tool.	<ul style="list-style-type: none"> • Book: Inventions All Around • Simple Machines • Inventions 	<ul style="list-style-type: none"> • More to Explore: Simple Machines <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Inventions
DEVELOPING AND USING MODELS		
Standard SCI.SEP2: Students develop and use models, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
<i>SEP2: Developing and Using Models</i>		
SCI.SEP2.K-2 Students use and develop models (i.e., diagrams, drawings, physical replicas, dioramas, dramatizations, or storyboards) that represent concrete events or design solutions. This includes the following: <ul style="list-style-type: none"> • Distinguish between a model and the actual object, process, or events the model represents. • Compare models to identify common features and differences. • Develop or use models to represent amounts, relationships, relative scales (bigger, smaller), and patterns in the natural and designed world(s) • Develop a simple model based on evidence to represent a proposed object or tool. 	<ul style="list-style-type: none"> • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Simple Machines • Inventions 	<ul style="list-style-type: none"> • More to Explore: Simple Machines <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Inventions

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
PLANNING AND CONDUCTING INVESTIGATIONS		
Standard SCI.SEP3: Students plan and conduct investigations, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP3: Planning and Conducting Investigations		
<p>SCI.SEP3.K-2 Students plan and carry out simple investigations, based on fair tests, which provide data to support explanations or design solutions. This includes the following:</p> <ul style="list-style-type: none"> • With guidance, plan and conduct an investigation in collaboration with peers (for K). • Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. • Evaluate different ways of observing and measuring a phenomenon to determine which way can answer the question being studied. • Make observations (firsthand or from media) and measurements to collect data that can be used to make comparisons. • Make observations (firsthand or from media) and measurements of a proposed object or tool or solution to determine if it solves a problem or meets a goal 	<ul style="list-style-type: none"> • Song: The Scientific Method • Science Investigation • Experiments: Air; Density; Buoyancy; Ecosystems; Health; Heat; Light; Matter; Plant; Pollution 	<ul style="list-style-type: none"> • More to Explore: Simple Machines <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Inventions

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
ANALYZE AND INTERPRET DATA		
Standard SCI.SEP4: Students analyze and interpret data, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP4: Analyzing and Interpreting Data		
<p>SCI.SEP4.K-2 Students collect, record, and share observations. This includes the following:</p> <ul style="list-style-type: none"> Record information (observations, thoughts, and ideas). Use and share pictures, drawings, or writings of observations. Use observations (first hand or from media) to describe patterns or relationships in the natural and designed worlds in order to answer scientific questions and solve problems. Compare predictions (based on prior experiences) to what occurred (observable events). Analyze data from tests of an object or tool to determine if the object or tool works as intended. 	<ul style="list-style-type: none"> Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright Observe a Simple System Science Tools Science Investigation Simple Machines Inventions Experiments: Air; Density; Buoyancy; Ecosystems; Health; Heat; Light; Matter; Plant; Pollution 	<ul style="list-style-type: none"> More to Explore: Simple Machines <p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: The World Around Us; Inventions

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MATHEMATICS AND COMPUTATIONAL THINKING		
Standard SCI.SEP5: Students use mathematics and computational thinking, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP5: Using Mathematics and Computational Thinking		
<p>SCI.SEP5.K-2 Students recognize that mathematics can be used to describe the natural and designed world. This includes the following:</p> <ul style="list-style-type: none"> • Use counting and numbers to identify and describe patterns in the natural and designed worlds. • Describe, measure, or compare quantitative attributes of different objects and display the data using simple graphs. • Use qualitative and/or quantitative data to compare two alternative solutions to a problem. 	<ul style="list-style-type: none"> • Graphs • Graphing • Bar Graphs • Calendar/Graph Weather • Picture Graphs • Science Tools 	
CONSTRUCT EXPLANATIONS AND DESIGN SOLUTIONS		
Standard SCI.SEP6: Students construct explanations and design solutions, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP6.A: Constructing an Explanation		
<p>SCI.SEP6.A.K-2 Students use evidence and ideas in constructing evidence-based accounts of natural phenomena. This includes the following:</p> <ul style="list-style-type: none"> • Use information from observations (firsthand and from media) to construct an evidence-based account for natural phenomena. 	<ul style="list-style-type: none"> • Science Investigation • Build Knowledge • Science Books (See titles at end of document.) • Experiments: Ecosystems; Light; Matter; Plant; Pollution 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SEP6.A: Constructing an Explanation <i>continued</i>		
<p>SCI.SEP6.B.K-2 Students use evidence and ideas in designing solutions. This includes the following:</p> <ul style="list-style-type: none"> • Use tools and materials to design and/or build a device that solves a specific problem or a solution to a specific problem. • Generate and compare multiple solutions to a problem. 	<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"> • More to Explore Experiment: Simple Machines

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
ENGAGE IN ARGUMENT FROM EVIDENCE		
Standard SCI.SEP7: Students engage in argument from evidence, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP7: Arguing from Evidence		
<p>SCI.SEP7.K-2 Students compare ideas and representations about the natural and designed world. This includes the following:</p> <ul style="list-style-type: none"> • Identify arguments that are supported by evidence. • Distinguish between explanations that account for all gathered evidence and those that do not. • Analyze why some evidence is relevant to a scientific question and some is not. • Distinguish between opinions and evidence in one’s own explanations. • Listen actively to arguments to indicate agreement or disagreement based on evidence, or to retell the main points of the argument. • Construct an argument with evidence to support a claim. • Make a claim about the effectiveness of an object, tool, or solution that is supported by relevant evidence. 	<ul style="list-style-type: none"> • Song: The Scientific Method • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Inventions • Science Books (See titles at end of document.) • Science Investigation • Experiments: Air; Density; Buoyancy; Ecosystems; Health; Heat; Light; Matter; Plant; Pollution 	<ul style="list-style-type: none"> • More to Explore Experiment: Simple Machines

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
OBTAIN, EVALUATE, AND COMMUNICATE INFORMATION		
Standard SCI.SEP8: Students obtain, evaluate, and communicate information, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.		
SEP8: Obtaining, Evaluating, and Communicating Information		
<p>SCI.SEP8.K-2 Students use observations and texts to communicate new information. This includes the following:</p> <ul style="list-style-type: none"> • Read developmentally appropriate texts or use media to obtain scientific and technical information. • Use the information to determine patterns in or evidence about the natural and designed worlds. • Describe how specific images (e.g., a diagram showing how a machine works) support a scientific or engineering idea. • Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering scientific questions or supporting scientific claims. • Communicate information or design ideas and solutions with others in oral or written forms. Use models, drawings, writing, or numbers that provide detail about scientific ideas, practices, or design ideas. 	<ul style="list-style-type: none"> • Song: Inventing • Books: Sound; The Pizza Book; Inventions All Around • Build Knowledge • Science Books (See titles at end of document.) • Observe a Simple System • Science Investigation 	<p>Engagement:</p> <ul style="list-style-type: none"> • How It Works

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
LIFE SCIENCE 1 (LS1)		
Structures and Processes		
Standard SCI.LS1: Students use science and engineering practices, crosscutting concepts, and an understanding of structures and processes (on a scale from molecules to organisms) to make sense of phenomena and solve problems.		
<i>SCI.LS1.A: Structure and Function</i>		
SCI.LS1.A.1 All organisms have external parts that they use to perform daily functions.	<ul style="list-style-type: none"> • Books: Animal Bodies • Functions of Plant Parts • Animal Bodies • Insects • Mammals • Fish • Amphibians • Reptiles 	
<i>SCI.LS1.B: Growth and Development of Organisms</i>		
SCI.LS1.B.1 Parents and offspring often engage in behaviors that help the offspring survive.	<ul style="list-style-type: none"> • Song: Animal Bodies • Animal Behavior • Animal Bodies 	
<i>SCI.LS1.C: Organization for Matter and Energy Flow in Organisms</i>		
SCI.LS1.C.K Animals obtain food they need from plants or other animals. Plants need water and light.	<ul style="list-style-type: none"> • Song: Plants are Growing • Book: Everybody Needs to Eat • What Animals Eat • Food Chains: Prairies; Wetlands; Polar Lands • Plants Need Water • Healthy Plants Needs • Plants and Animals Need Air 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Green and Growing
<i>SCI.LS1.D: Information Processing</i>		
SCI.LS1.D.1 Animals sense and communicate information and respond to inputs with behaviors that help them grow and survive.	<ul style="list-style-type: none"> • Animal Behavior 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.LS1: Example Three-Dimensional Performance Indicators</i>		
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: Plants are Growing; Water • Books: Everybody Needs to Eat; Mela’s Water Pot • Plants Need Water • Healthy Plants Needs • Plants and Animals Need Air • Sun • Plants • Water 	<ul style="list-style-type: none"> • More to Explore Experiment: Water for Plants <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Green and Growing
1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants 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 	
K-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 	
LIFE SCIENCE 2 (LS2)		
Interactions, Energy, and Dynamics Within Ecosystems		
Standard SCI.LS2: Students use science and engineering practices, crosscutting concepts, and an understanding of interactions, energy, and dynamics within ecosystems to make sense of phenomena and solve problems.		
<i>SCI.LS2.A: Interdependent Relationships in Ecosystems</i>		
SCI.LS2.A.2 Plants depend on water and light to grow. Plants depend on animals for pollination or to move their seeds around.	<ul style="list-style-type: none"> • Song: Plants are Growing • Books: The Old Maple Tree; A Seed Grows • Healthy Plant Needs • Plants Need Water • Plants and Animals Need Air • Plant Life Cycle and Growth 	<ul style="list-style-type: none"> • More to Explore Experiment: Water for Plants <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Green and Growing
<i>SCI.LS2: Example Three-Dimensional Performance Indicators</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"> • Plant Experiment 	<ul style="list-style-type: none"> • More to Explore Experiment: Water for Plants <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Green and Growing
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"> • Book: The Bee’s Secret • Plant Life Cycle and Growth 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
LIFE SCIENCE 3 (LS3)		
Heredity		
Standard SCI.LS3: Students use science and engineering practices, crosscutting concepts, and an understanding of heredity to make sense of phenomena and solve problems.		
<i>SCI.LS3.A: Inheritance of Traits</i>		
SCI.LS3.A.1 Young organisms are very much, but not exactly, like their parents, and also resemble other organisms of the same kind.	<ul style="list-style-type: none"> • Song: Traits • Books: George and Jack; Mine • Animal Bodies • Animal Behavior • Build Knowledge: Mine 	<ul style="list-style-type: none"> • More to Explore Experiment: Traits
<i>SCI.LS3.B: Variation of Traits</i>		
SCI.LS3.B.1 Individuals of the same kind of plant or animal are recognizable as similar, but can also vary in many ways	<ul style="list-style-type: none"> • Song: Traits • Books: George and Jack; Mine • Animal Bodies • Animal Behavior • Build Knowledge: Mine 	<ul style="list-style-type: none"> • More to Explore Experiment: Traits
<i>SCI.LS3: Example Three-Dimensional Performance Indicators</i>		
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"> • Song: Traits • Books: George and Jack; Mine • Animal Bodies • Animal Behavior • Build Knowledge: Mine 	<ul style="list-style-type: none"> • More to Explore Experiment: Traits
<i>SCI.LS4: Example Three-Dimensional Performance Indicator</i>		
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 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Places on Earth

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
PHYSICAL SCIENCE 1 (PS1)		
Matter and Its Interactions		
SCI.PS1.A: Structure and Function		
<p>SCI.PS1.A.2 Matter exists as different substances that have different observable properties. Different properties are suited to different purposes. Objects can be built up from smaller parts.</p>	<ul style="list-style-type: none"> • Song: Solid or Liquid • Books: Warm Soup for Dedushka; Pancakes Matter; Inventions All Around • Changes in Matter • Solid and Liquid • Solid, Liquid, Gas • States of Water • Materials • Matter • Inventions 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Solids, Liquids, and Gases
SCI.PS1.B: Chemical Reactions		
<p>SCI.PS1.B.2 Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.</p>	<ul style="list-style-type: none"> • Book: Pancakes Matter • Changes in Matter • States of Water 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Solids, Liquids, and Gases
SCI.PS1: Example Three-Dimensional Performance Indicators		
<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"> • States of Water • Materials • Science Investigation • Experiments: Density; Buoyancy; Matter 	
<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 • Experiments: Density; Buoyancy; Matter 	
<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 • Inventions 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.PS1: Example Three-Dimensional Performance Indicators 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"> • Book: Pancakes Matter • Changes in Matter • States of Water 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Solids, Liquids, and Gases
PHYSICAL SCIENCE 2 (PS2)		
<i>Forces, Interactions, Motion, and Stability</i>		
Standard SCI.PS2: Students use science and engineering practices, crosscutting concepts, and an understanding of forces, interactions, motion, and stability to make sense of phenomena and solve problems.		
<i>SCI.PS2.A: Forces and Motion</i>		
<p>SCI.PS2.A.K Pushes and pulls can have different strengths and directions, and can change the speed or direction of an object's motion, or start or stop it.</p> <p>A bigger push or pull makes things speed up or slow down more quickly</p>	<ul style="list-style-type: none"> • Song: Push and Pull • Book: Mr. Mario's Neighborhood • Push and Pull 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: How It Works
<i>SCI.PS2.B: Types of Interactions</i>		
SCI.PS2.B.K When objects touch or collide, they push on one another and can result in a change of motion.	<ul style="list-style-type: none"> • Song: Push and Pull • Book: Mr. Mario's Neighborhood • Push and Pull 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: How It Works
<i>SCI.PS2: Example Three-Dimensional Performance Indicators</i>		
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 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: How It Works
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	<ul style="list-style-type: none"> • Song: Push and Pull • Book: Mr. Mario's Neighborhood • Push and Pull 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: How It Works

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
PHYSICAL SCIENCE 3 (PS3)		
Energy		
Standard SCI.PS3: Students use science and engineering practices, crosscutting concepts, and an understanding of energy to make sense of phenomena and solve problems.		
<i>SCI.PS3.C: Relationships between Energy and Forces</i>		
SCI.PS3.C.K Bigger pushes and pulls cause bigger changes in an object's motion or shape.	<ul style="list-style-type: none"> Song: Push and Pull Book: Mr. Mario's Neighborhood Push and Pull 	Engagement: <ul style="list-style-type: none"> Learning Together: How It Works
<i>SCI.PS3.D: Energy in Chemical Processes and Everyday Life</i>		
SCI.PS3.D.K Sunlight warms Earth's surface.	<ul style="list-style-type: none"> Song: Sun Blues Sun 	Engagement: <ul style="list-style-type: none"> Learning Together: The Sky Above Us
<i>SCI.PS3: Example Three-Dimensional Performance Indicators</i>		
K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	<ul style="list-style-type: none"> Song: Sun Blues Sun Sun, Moon, and Earth 	Engagement: <ul style="list-style-type: none"> Learning Together: The Sky Above Us
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.	
PHYSICAL SCIENCE 4 (PS4)		
Waves and Their Applications in Technologies for Information Transfer		
<i>SCI.PS4.A: Wave Properties</i>		
SCI.PS4.A.1 Sound can make matter vibrate, and vibrating matter can make sound	<ul style="list-style-type: none"> Song: Sound Book: What Sounds Say Sound Waves 	<ul style="list-style-type: none"> More to Explore Experiment: Sound
<i>SCI.PS4.B: Electromagnetic Radiation</i>		
SCI.PS4.B.1 Objects can be seen only when light is available to illuminate them.	<ul style="list-style-type: none"> Books: My Family Campout; Lightning Bugs Light Properties Properties of Light 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
SCI.PS4.C: Information Technologies and Instrumentation		
SCI.PS4.C.1 People use devices to send and receive information.	<ul style="list-style-type: none"> • Song: Inventing • Book: Inventions All Around • Inventions 	
SCI.PS4: Example Three-Dimensional Performance Indicators		
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"> • More to Explore Experiment: 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 	
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"> • Books: My Family Campout; Lightning Bugs • Light Properties • Properties of Light 	
1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	
EARTH AND SPACE SCIENCE 1 (ESS1)		
Earth's Place in the Universe		
Standard SCI.ESS1: Students use science and engineering practices, crosscutting concepts, and an understanding of earth's place in the universe to make sense of phenomena and solve problems.		
<i>SCI.ESS1.A: The Universe and Its Stars</i>		
SCI.ESS1.A.1 Patterns of movement of the sun, moon, and stars, as seen from Earth, can be observed, described, and 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"> • More to Explore Experiment: The Moon <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Sky Above Us

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ESS1.B: Earth and the Solar System</i>		
SCI.ESS1.B.1 Seasonal patterns of sunrise and sunset can be observed, described, and predicted.	<ul style="list-style-type: none"> • Song: Seasons • Books: The Four Seasons; That’s What I Like: A Book About Seasons • Weather Patterns • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Weather Around Us
<i>SCI.ESS1.C: The History of Planet Earth</i>		
SCI.ESS1.C.2 Some events on Earth occur very quickly; others can occur very 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"> • More to Explore Experiment: Rocks
<i>SCI.ESS1: Example Three-Dimensional Performance Indicators</i>		
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 • Sun • Moon • Constellations 	<ul style="list-style-type: none"> • More to Explore Experiment: The Moon <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: The Sky Above Us
1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year	<ul style="list-style-type: none"> • Sun • Spring • Summer • Fall • Winter 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ESS1: Example Three-Dimensional Performance Indicators continued</i>		
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"> • More to Explore Experiment: Rocks
EARTH AND SPACE SCIENCE 2 (ESS2)		
Earth’s Systems		
Standard SCI.ESS2: Students use science and engineering practices, crosscutting concepts, and an understanding of earth’s systems to make sense of phenomena and solve problems.		
<i>SCI.ESS2.A: Earth Materials and Systems</i>		
SCI.ESS2.A.2 Wind and water change the shape of the land.	<ul style="list-style-type: none"> • Book: Mela’s Water Pot • Water Sources 	
<i>SCI.ESS2.B: Plate Tectonics and Large-Scale System Interactions</i>		
SCI.ESS2.B.2 Maps show where things are located. One can map the shapes and kinds of land and water in any area.	<ul style="list-style-type: none"> • Song: Natural Resources • Earth 	
<i>SCI.ESS2.C: The Roles of Water in Earth’s Surface Processes</i>		
SCI.ESS2.C.2 Water is found in many types of places and in different forms on Earth.	<ul style="list-style-type: none"> • Song: Precipitation • Water Sources 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ESS2.D: Weather and Climate</i>		
<p>SCI.ESS2.D.K Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region and time. People record weather patterns over time.</p>	<ul style="list-style-type: none"> • Song: Seasons • Books: Whatever the Weather; That's What I Like: A Book About Seasons • Calendar/Graph Weather • Weather Tools • Weather Patterns • Weather Affects People and Animals • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Weather; The Weather Around Us
<i>SCI.ESS2.E: Biogeology</i>		
<p>SCI.ESS2.E.K Plants and animals can change their local environment.</p>	<ul style="list-style-type: none"> • Books: Winter Snoozers; Turtle's Pond; The Old Maple Tree 	
<i>SCI.ESS2: Example Three-Dimensional Performance Indicators</i>		
<p>K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time</p>	<ul style="list-style-type: none"> • Song: Seasons • Book: That's What I Like: A Book About Seasons • Calendar/Graph Weather • Weather Patterns • Spring • Summer • Fall • Winter 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Weather; The Weather Around Us
<p>K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p>	<ul style="list-style-type: none"> • Books: Winter Snoozers; Turtle's Pond; The Old Maple Tree 	
<p>2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land</p>		

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ESS2: Example Three-Dimensional Performance Indicators</i>		
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-ESS2-3. 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; Precipitation • Book: Water Is All Around • Water Sources • Water • Water Cycle • States of Water 	
EARTH AND SPACE SCIENCE 3 (ESS3)		
Earth and Human Activity		
Standard SCI.ESS3: Students use science and engineering practices, crosscutting concepts, and an understanding of earth and human activity to make sense of phenomena and solve problems.		
<i>SCI.ESS3.A: Natural Resources</i>		
SCI.ESS3.A.K Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.	<ul style="list-style-type: none"> • Songs: Natural Resources; Four Ecosystems • Book: Where in the World Would You Go Today? • Oceans • Mountains • Deserts • Wetlands • Rainforests 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth; Natural Resources
<i>SCI.ESS3.B: Natural Hazards</i>		
SCI.ESS3.B.K In a region, some kinds of severe weather are more likely than others. Forecasts allow communities to prepare for severe weather.	<ul style="list-style-type: none"> • Songs: Precipitation; Storms • Book: Whatever the Weather • Weather Tools • Calendar/Graph Weather 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Weather; The Weather Around Us
<i>SCI.ESS3.C: Human Impacts on Earth Systems</i>		
SCI.ESS3.C.K Things people do can affect the environment but they can make choices to reduce their impacts.	<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"> • More to Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ESS3: Example Three-Dimensional Performance Indicators</i>		
<p>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.</p>	<ul style="list-style-type: none"> • Song: Four Ecosystems • Book: Where in the World Would You Go Today? • Natural Resources • Oceans • Mountains • Deserts • Rainforests 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth; Natural Resources
<p>K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p>	<ul style="list-style-type: none"> • Songs: Precipitation; Storms • Book: Whatever the Weather • Weather Tools • Calendar/Graph Weather 	
<p>K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, or other living things in the local environment.</p>	<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"> • More to Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth
ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 1 (ETS)		
Engineering Design		
<p>Standard SCI.ETS1: Students use science and engineering practices, crosscutting concepts, and an understanding of engineering design to make sense of phenomena and solve problems.</p>		
<i>SCI.ETS1.A: Defining and Delimiting Engineering Problems</i>		
<p>SCI.ETS1.A.K-2 A situation that people want to change or create can be approached as a problem to be solved through engineering.</p> <ul style="list-style-type: none"> • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem. 	<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"> • More to Explore Experiment: Recycling; Simple Machines

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ETS1.B: Developing Possible Solutions</i>		
<p>SCI.ETS1.B.K-2 Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.</p>	<ul style="list-style-type: none"> Books: How Did the Chicken Cross the Road?; Sound Simple Machines 	<p>Engagement:</p> <ul style="list-style-type: none"> Learning Together: How It Works
<i>SCI.ETS1.C: Optimizing the Design Solution</i>		
<p>SCI.ETS1.C.2 Because there is more than one possible solution to a problem, it is useful to compare and test designs.</p>	<ul style="list-style-type: none"> Book: Warm Soup for Dedushka Heat Movement Experiment: Air; Density; Buoyancy; Ecosystems; Heat; Light; Matter; Plant; Pollution 	<ul style="list-style-type: none"> More to Explore Experiment: Evaporation
<i>SCI.ETS1: Example Three-Dimensional Performance Indicators</i>		
<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"> More to Explore Experiment: 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>	<p>Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.</p>	
<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 Experiment: Air; Density; Buoyancy; Ecosystems; Heat; Light; Matter; Plant; Pollution 	<ul style="list-style-type: none"> More to Explore Experiment: Evaporation

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 2 (ETS2)		
<i>Links Among Engineering, Technology, Science, and Society</i>		
Standard SCI.ETS2: Students use science and engineering practices, crosscutting concepts, and an understanding of links among engineering, technology, science, and society to make sense of phenomena and solve problems.		
<i>SCI.ETS2.A: Interdependence of Science, Engineering, and Technology</i>		
CI.ETS2.A.K-2 Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	<ul style="list-style-type: none"> • More to Explore Experiment: Simple Machines <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Inventions
<i>SCI.ETS2.B: Influence of Engineering, Technology, and Science on Society and the Natural World</i>		
SCI.ETS2.B.K-2 Every human-made product is designed by applying some knowledge of the natural world and is built by using natural materials. Taking natural materials to make things impacts the environment.	<ul style="list-style-type: none"> • Songs: Inventing; Natural Resources; Conservation • Books: Inventions All Around; I Want to Be a Scientist Like Wilbur and Orville Wright • Inventions • Natural Resources 	
<i>SCI.ETS2: Example Three-Dimensional Performance Indicators</i>		
K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, 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"> • More to Explore Experiment: Recycling <p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: Our Earth
1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants 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 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
ENGINEERING, TECHNOLOGY, AND THE APPLICATION OF SCIENCE 3 (ETS3)		
Nature of Science and Engineering		
Standard SCI.ETS3: Students use science and engineering practices, crosscutting concepts, and an understanding of the nature of science and engineering to make sense of phenomena and solve problems.		
<i>SCI.ETS3.A: Science and Engineering Are Human Endeavors</i>		
SCI.ETS3.A.K-2 People of diverse backgrounds can become scientists and engineers. <ul style="list-style-type: none"> • People have practiced science and engineering for a long time. • Creativity and imagination are important to science and engineering. 	<ul style="list-style-type: none"> • Books: I Want to Be a Scientist Like... Stephen Hawking; Marie Curie; Jane Goodall; George Washington Carver; Antoni van Leeuwenhoek; Thomas Edison; Wilbur and Orville Wright; Isaac Newton; Alexander von Humboldt; Louis Pasteur 	
<i>SCI.ETS3.B: Science and Engineering Are Unique Ways of Thinking With Different Purposes</i>		
SCI.ETS3.B.K-2 Scientists use evidence to explain the natural world. Science assumes natural events happen today as they happened in the past. <ul style="list-style-type: none"> • Engineers solve problems to meet the needs of people and communities. 	<ul style="list-style-type: none"> • Books: I Want to Be a Scientist Like... Stephen Hawking; Marie Curie; Jane Goodall; George Washington Carver; Antoni van Leeuwenhoek; Thomas Edison; Wilbur and Orville Wright; Isaac Newton; Alexander von Humboldt; Louis Pasteur 	
<i>SCI.ETS3.C: Science and Engineering Use Multiple Approaches to Create New Knowledge and Solve Problems</i>		
SCI.ETS3.C.K-2 Science and engineers use many approaches to answer questions about the natural world and solve problems. <ul style="list-style-type: none"> • Scientific explanations are strengthened by being supported with evidence. • An engineering problem can have many solutions. • The strength of a solution depends on how well it solves the problem. 	<ul style="list-style-type: none"> • Books: I Want to Be a Scientist Like... Stephen Hawking; Marie Curie; Jane Goodall; George Washington Carver; Antoni van Leeuwenhoek; Thomas Edison; Wilbur and Orville Wright; Isaac Newton; Alexander von Humboldt; Louis Pasteur 	

WISCONSIN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>SCI.ETS3: Example Three-Dimensional Performance Indicators</i>		
K-ETS3-1. Compare data from two types of investigations (e.g. hands-on and computer-based games) to show that pushes and pulls of different strengths have different effects (PS2.A.K).	<ul style="list-style-type: none"> • Song: Push and Pull • Book: Mr. Mario's Neighborhood • Push and Pull 	<p>Engagement:</p> <ul style="list-style-type: none"> • Learning Together: How It Works
1-ETS3-1. Construct an argument with evidence that humans today and long ago have used ideas from plants and animals to help them survive (LS1.A.1).	<ul style="list-style-type: none"> • Animal Adaptations and Human Tools 	
2-ETS3-1. Design creative solutions to a problem caused when there is a quick change to the earth's surface (e.g. natural disasters) (ESS1.C.2).	Waterford encourages everyone to have writing, drawing, and art materials available for children's creations.	

PRE-MATH & SCIENCE

Math Books

Zero In My Toybox; One Day on the Farm; Two Feet; Look for Three; Four Fine Friends; Grandpa's Great Athlete: A Book About 5; Hide and Seek Six; Just Seven; Eight at the Lake; 9 Cat Night; Ten for My Machine; The Search for Eleven; The Tasty Number Twelve; Thirteen in My Garden; Fourteen Camel Caravan; Fifteen on a Spring Day; Dinner for Sixteen; The Seventeen Machine; Eighteen Carrot Stew; Nineteen Around the World; Twenty Clay Children; Poor Wandering 1; Snowy Twos Day; 1, 2, 3, 4 in the Jungle; Give Me 5; Suzy Ladybug; 7 Train; 8 Octopus Legs; Highway 9; 10 Astronauts; When I Saw 11; I Love the Number 12; 13 Clues; 14 Camels; Fun 15; 16 Ants; Counting to 17; 18 Carrot Stew; 19 Around the World; 20 Fingers and Toes

Science Books

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

Counting Songs

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

Number Songs

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

BASIC MATH & SCIENCE

Math & Science Books

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

FLUENT MATH & SCIENCE

Math & Science Books

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



SUPPORT

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

CONTINUAL DEVELOPMENT

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

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).