

CURRICULUM *Correlation*

*Waterford Math
& Science*

100%

*Arizona
Mathematics
Standards 2017*

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OVERVIEW



This document provides a detailed correlation of WATERFORD MATH & SCIENCE *to* ARIZONA MATHEMATICS STANDARDS 2017.

WATERFORD CURRICULUM DETAILS

Waterford Curriculum provides technology-driven curriculum for early learners.

Waterford Early Learning is a technology-based early reading, math, and science program with integrated assessments and teacher resources.

Waterford Reading is a comprehensive, adaptive reading curriculum designed to help each student become a fluent reader. Waterford Reading incorporates five essential reading strands: phonological awareness, phonics, comprehension and vocabulary, language concepts, and fluency.



Following an extensive review, Waterford Reading received CASE endorsement in 2016. The Council of Administrators of Special Education (CASE) is an international educational organization affiliated with the Council for Exceptional Children.

Waterford Math & Science provides young learners comprehensive instruction in the major areas of early math: numbers and operation, algebraic reasoning, geometry and measurement, and data analysis. The integrated science curriculum emphasizes exploration and the scientific method while teaching earth, life, and physical science.

EVIDENCE-BASED CURRICULUM

Waterford curriculum has been formally [evaluated in dozens of studies](#). In each study, Waterford classrooms outperform comparison-group classes in most, if not all, of the examined measures. In

particular, Waterford stands out for providing significant learning gains for at-risk students and English Language Learners.

STUDENT-CENTERED LEARNING

Waterford's student-centered, personalized learning software adapts automatically to give each student a unique learning experience tailored to his or her own skill level and pace.

Placement Assessment: Students begin their experience with a Placement Assessment. Based on rigorous research, the Placement Assessment evaluates a student's abilities and determines an appropriate starting point.

Adaptive, Individualized Learning: Waterford provides a mastery-based curriculum. As such, Waterford automatically provides instruction, remediation, and review to support students toward mastery of learning objectives based on student performance in ongoing assessment.

Data-Informed Instruction: Administrators and teachers can also use the program's rich reporting features to monitor progress in real-time, to identify areas of difficulty, and to utilize additional intervention tools in varied instructional settings.

TEACHER RESOURCES

With resources available in the Waterford Manager, thousands of online activities are available for teachers to use with an interactive whiteboard or projector. This flexible tool for blended learning increases teachers' instructional efficacy. [Teachers can easily deliver engaging lessons](#) aligned to their own pacing guide, core curriculum, or state standards.

For preK teachers looking for daily lesson plans, a complete curriculum comprised of seven thematic units is available for download in the Waterford Manager.

CORRELATION DESCRIPTION

This document correlates state standards to Waterford resources. Waterford resources include

- **Digital Resources:** Engaging, evidence-based online activities that are presented to students during their individualized instruction. These activities are also available for collaborative instruction in Classroom Advantage.
- **Print, PDF, and Internet Resources:** Teacher guides, Waterford Manager teacher PDFs, hundreds of student books and songs, family engagement activities, newsletters and more complement Waterford's extensive digital resources.

CONTINUAL DEVELOPMENT

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



SUPPORT

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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES*
KINDERGARTEN		
COUNTING AND CARDINALITY (CC)		
Know number names and count the sequence		
K.CC.A.1. Count to 100 by ones and by tens.	<ul style="list-style-type: none"> • Number Songs • Counting Songs • Math Books (See titles at end of document.) • Number Counting • Order Numbers • Number Recognition and Sense • Number Instruction • Skip Counting • Counting Puzzle 	<ul style="list-style-type: none"> • Count to 100 by ones and tens.pdf: Count to 100 by ones and tens. <ul style="list-style-type: none"> - Missing Numbers - Count On By 1 - Numbers 1-5 - Numbers 6-10 - Math Newsletters - Count By 10s - Numbers 60-69 - I Can Count to 100
K.CC.A.2. Count forward from a given number other than one, within the known sequence (e.g., “Starting at the number 5, count up to 11.”).	<ul style="list-style-type: none"> • Song: Counting On • Count On • Counting Songs (See titles at end of document.) • Counting Puzzle • Dot-to-Dot 	<ul style="list-style-type: none"> • Counting 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
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).	<ul style="list-style-type: none"> • Math Books • Counting Songs • Number Songs (See titles at end of document.) • Number Counting • Number Instruction • Number Recognition and Sense • Make and Count Groups • Counting Puzzle 	<ul style="list-style-type: none"> • Writing from 0 to 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: 1-20 (one per number) - Numbers 1-5 - Add groups - Count on by 1 - Number Writing Practice: 0-20 (one per number)

* Waterford Teacher Resources are available for download in the Waterford Manager (<https://manager.waterford.org/>).



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Count to tell the number of objects		
<p>Understand the relationship between numbers and quantities; connect counting to cardinality.</p> <p>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.</p>	<ul style="list-style-type: none"> • Counting Songs • Number Songs • Math Books • Number Counting • Order Numbers • One-to-one Correspondence • Make and Count Groups • Number Instruction • Number Recognition and Sense • Counting Puzzle • Dot-to-Dot 	<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>K.CC.B.4b. 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.</p>	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence • Order Numbers 	<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>K.CC.B.4c. Understand that each successive number name refers to a quantity that is one larger (hierarchical inclusion).</p>	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence • Order Numbers • Count On by 1 	<ul style="list-style-type: none"> • Object Counting Succession.pdf: Understand that each successive number name refers to a quantity that is one larger. <ul style="list-style-type: none"> - Hoop Addition
<p>K.CC.B.5. Count to answer questions about “how many?” when 20 or fewer objects are 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 • Number Songs • Math Books (See titles at end of document.) • Make and Count Groups • Number Counting • Order Numbers • Number Instruction • Number Recognition and Sense • Numbers Review • Match Numbers • Bug Fun • 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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Compare numbers		
<p>K.CC.C.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. (Include groups with up to ten objects.)</p>	<ul style="list-style-type: none"> • Book: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make a Math Story: 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? 1 - Fewer Than - More or Fewer - Which Has More? 2 - Greater or Less - More Than/Fewer Than Flashcard Sets
<p>K.CC.C.7. Compare two numbers between 0 and 10 presented as written numerals.</p>	<ul style="list-style-type: none"> • Book: For the Birds • Number Recognition and Sense • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Order Numbers • Make a Math Story: More Than, Fewer Than 	<ul style="list-style-type: none"> • Comparing 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 - Spinner - Board game - Number cards
OPERATIONS AND ALGEBRAIC THINKING (OA)		
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from		
<p>K.OA.A.1. Represent addition and subtraction concretely.</p>	<ul style="list-style-type: none"> • Songs: Addition; Pirates Can Add; 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 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i>		
<p>K.OA.A.2. Solve addition and subtraction word problems, and add and subtract within 10.</p>	<ul style="list-style-type: none"> • Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups • Subtract Groups • Minuends to 5 • Minuends to 9 • Sums to 4-10 and Subtract from 4-9 • Act Out Addition • Act Out Subtraction • Flower Story Problems • Story Problem Strategies 	<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 - Addition Newsletter - Subtraction Newsletter - Subtraction Flashcards
<p>K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way (e.g., using fingers, objects, symbols, tally marks, drawings, expressions).</p>	<ul style="list-style-type: none"> • Make and Count Groups • Minuends to 9 • Subtract Groups • Minuends to 5 • Act Out Subtraction • Subtract Doubles to 10 	
<p>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., using fingers, objects, symbols, tally marks, drawings, or equation).</p>	<ul style="list-style-type: none"> • Missing Addends • Count On • Doubles, Sums to 10 • Doubles Plus 1, Sums to 10 • Act Out Addition • Flower Story Problems 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i>		
<p>K.OA.A.5. Fluently add and subtract within 5.</p>	<ul style="list-style-type: none"> • Songs: Addition; Pirates Can Add; On the Bayou; Bakery Subtraction; Subtract Those Cars; Circus Subtraction • Book: Five Delicious Muffins • Add Groups to 5 • Subtract Groups • Minuends to 5 • Subtract from 5 • Sums • Act Out Addition • Act Out Subtraction • Speed Games • Mental Math Games 	
NUMBER AND OPERATIONS IN BASE TEN (NBT)		
Work with numbers 11-19 to gain foundations for place value.		
<p>K.NBT.A.1. Compose and decompose numbers from 11 to 19 into ten ones and some additional ones by using objects, drawings, and/or equations. Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones (e.g., $18 = 10 + 8$).</p>	<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 - Place Value 11-19 (2)
Use place value understanding and properties of operations to add and subtract.		
<p>K.NBT.B.2. Demonstrate understanding of addition and subtraction within 10 using place value.</p>	<ul style="list-style-type: none"> • Place Value 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MEASUREMENT AND DATA (MD)		
Describe and compare measurable attributes		
<p>K.MD.A.1. Describe measurable attributes of a single object (e.g., length and weight).</p>	<ul style="list-style-type: none"> • Song: Measuring Plants • Length • Capacity 	<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>K.MD.A.2. Directly compare two objects with a measurable attribute in common, to see which object has “more of” or “less of” the attribute, and describe the difference. (e.g., directly compare the length of 10 cubes to a pencil and describe one as longer or shorter).</p>	<ul style="list-style-type: none"> • Songs: Savanna Size, Measuring Plants • Capacity • Length • Order Size • Big and Little • Tall and Short • Heavy and Light • 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 - Big and Little - Tall and Short - Heavy and Light - Small, Medium, Large - Measuring Length - Measurable Attributes



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Describe and compare measurable attributes <i>continued</i>		
<p>K.MD.B.3. Classify objects into given categories; count the number 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 • Match • Sort • Make and Count Groups • Logic Game 	<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
GEOMETRY (G)		
Identify and describe shapes.		
<p>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: Positioning; Kites; Get Over the Bugs; Shapes, Shapes, Shapes; Up in the Air • Books: The Shape of Things; Imagination Shapes • Position • Over, Under, Above, Below • Inside, Outside, Between • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Diamond • Simple Shapes • Solid Shapes • World Shapes • Above, Below, Next to, On • Story Problem Strategies: Shapes • Right, Left 	<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>K.G.A.2. Correctly name shapes regardless of their orientations or overall size (e.g., circle, triangle, square, rectangle, rhombus, trapezoid, hexagon, cube, cone, cylinder, sphere).</p>	<ul style="list-style-type: none"> • Songs: Kites; Shapes, Shapes, Shapes; Up in the Air • Books: The Shape of Things; Imagination Shapes • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Diamond • Simple Shapes • Solid Shapes • World Shapes • Story Problem Strategies: 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>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 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Analyze, compare, create, and compose shapes		
<p>K.G.B.4. Analyze and compare two-dimensional 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 • Story Problem Strategies: Similar Figures 	
<p>K.G.B.5. Model shapes in the world by building shapes from components (e.g., use sticks and clay balls) and drawing shapes.</p>	<ul style="list-style-type: none"> • Geoboard • Tangrams 	
<p>K.G.B.6. Use simple shapes to form composite 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 	
FIRST GRADE		
OPERATIONS AND ALGEBRAIC THINKING (OA)		
Represent and solve problems involving addition and subtraction		
<p>1.OA.A.1. Use addition and subtraction within 20 to solve word problems with unknowns in all positions (e.g., by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Doubles • Book: Facts About Families • Addition and Subtraction Fact Families • Addition and Subtraction Relationship • Doubles, Sums to 20 • Subtract Doubles to 20 • Problem Solving Strategy: Model or Act Out • Story Problem Strategies • Mental Math Games (Addition Facts to 20) • Kingdom of Counting (Subtract Doubles to 20) • Mental Math Games (Subtraction Facts to 20) 	<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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Represent and solve problems involving addition and subtraction <i>continued</i>		
<p>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/or equations with a symbol for the unknown number to represent the problem.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Add 3 One-digit Numbers • Problem Solving Strategy: Model or Act Out • Doubles, Sums to 20 	<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
Understand and apply properties of operations and the relationship between addition and subtraction		
<p>1.OA.B.3. Apply properties of operations (Commutative and associative properties of addition) as strategies to add and subtract within 20.</p>	<ul style="list-style-type: none"> • Addition and Subtraction Relationship • Addition and Subtraction Fact Families • Subtraction Patterns • Commutative Property of Addition • Kingdom of Counting: Commutative Property of Addition • Mental Math Games: Commutative Property of Addition 	
<p>1.OA.B.4. Understand subtraction as an unknown-addend problem within 20 (e.g., 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 • Kingdom of Counting: Missing Minuends and Subtrahends, Missing Addends, Missing Addends to Sums to 10 • Mental Math Games: Missing Addends 	<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.
Add and subtract within 10		
<p>1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<ul style="list-style-type: none"> • Song: Counting On • Books: Circus 20; Painting by Number • Skip Count by 2 • Count On • Make and Count Groups • Add Groups • Subtract Groups • Song: Counting Backward • Book: A Space Adventure • Count Down 	<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 10s - Count by 5s - Count by 2s



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Add and subtract within 10 continued</i>		
<p>1.OA.C.6. Fluently add and subtract within 10.</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On; Finding the Difference • Books: Facts about Families; Circus 20; Painting by Number • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Add 3 One-digit Numbers • Subtraction Patterns • Mental Math Games • Speed Games 	<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 - Add _ 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 - Fact Families to 20 - Add and Subtract Doubles to 10 - Add and Subtract Doubles to 20 <i>Sets of flashcards:</i> <ul style="list-style-type: none"> - Addition—horizontal - Subtraction—horizontal - Addition—vertical - Subtraction—horizontal



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Work with addition and subtraction equations		
<p>1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. (e.g., Which of the following equations are true and which are false? $6 + 1 = 6 - 1$, $7 = 8 - 1$, $5 + 2 = 2 + 5$).</p>	<ul style="list-style-type: none"> • Song: Fact Families • Book: Facts About Families • Addition and Subtraction Fact Families • Commutative Property of Addition • Addition and Subtraction Relationship • Addition Sentences • Subtraction Sentences • Greater Than, Less Than • More Than, Fewer Than 	
<p>1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ? - 3$, $6 + 6 = ?$).</p>	<ul style="list-style-type: none"> • Addition Sentences • Subtraction Sentences • Addition and Subtraction Fact Families • Missing Addends • Missing Minuends and Subtrahends • Mental Math Games 	
NUMBER AND OPERATIONS IN BASE TEN (NBT)		
Extend the counting sequence		
<p>1.NBT.A.1. Count to 120 by 1's, 2's, and 10's, starting at any number less than 100. 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 • Books: Painting by Number; Circus 20; Hooray, Hooray for the One Hundredth Day! • Count On • Number Recognition and Sense • 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 - Numbers 30-39 - Numbers 40-49 - Numbers 50-59 - Numbers 60-69 - Counting to 89 Counting Charts: <ul style="list-style-type: none"> - I Can Count to 50 - I Can Count to 100 - I Can Count to 99 - I Can Count to 120



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Understand place value		
<p>Understand that the two digits of a two-digit number represent groups of tens and ones. Understand the following as special cases: 1.NBT.B.2a. 10 can be thought of as a bundle of ten ones—called a “ten.”</p>	<ul style="list-style-type: none"> • Song: Place Value • Place Value of 2-digit Numbers • Expanded Notation • Add with Manipulatives • Flower Story Problems • Number Recognition and Sense 	<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
<p>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.</p>	<ul style="list-style-type: none"> • Song: Place Value • Place Value of 2-digit Numbers • Expanded Notation • Add with Manipulatives • Flower Story Problems • Number Recognition and Sense 	<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
<p>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).</p>	<ul style="list-style-type: none"> • Expanded Notation • Story Problem Strategies: Expanded Notation, Place Value • Place Value • Place Value of 2-digit Numbers • Number Recognition and Sense Review 	<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
<p>1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p>	<ul style="list-style-type: none"> • Place Value • Greater Than, Less Than (2-digit Numbers) • You Be the Teacher: Greater Than, Less Than 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Use place value understanding and properties of operations to add and subtract		
<p>1.NBT.C.4. Demonstrate understanding of addition within 100, connect objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.</p>	<ul style="list-style-type: none"> • Addition • Add Tens • Doubles • Doubles Plus 1 • Add with Manipulatives • Add Vertical Squares • Add with Beads • Addition and Subtraction Relationship • Flower Story Problems • Story Problem Strategies • Mental Math Games • Speed Games • 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 • You Be the Teacher: Add 2-digit Numbers without Regrouping • You Be the Teacher: 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 - Newsletter - Adding Tens and Ones - Color Adds Up - Cookies and Milk! - Addition of Two-Digit Numbers - Addition and Subtraction of Large Numbers - 1 set of flashcards
<p>1.NBT.C.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.</p>	<ul style="list-style-type: none"> • Song: Skip Counting • Book: Navajo Beads • Add 10 and 6-10 • Subtract 10 from 10-20 • Add Tens • Subtract Tens • Skip Count by 10 • Number Chart • Kingdom of Counting • Flower Story Problems 	<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 - Flashcards - Bingo - Addition of Tens



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Use place value understanding and properties of operations to add and subtract <i>continued</i>		
<p>1.NBT.C.6. Subtract multiples of 10 in the range of 10–90 (positive or zero differences), using objects 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 form.</p>	<ul style="list-style-type: none"> • Subtraction • Subtraction Sentences • Subtract Tens • Subtraction Patterns • Subtract 10 from 10–20 • Place Value • Addition and Subtraction Relationship • Use Manipulatives • Flower Story Problems: Subtraction Patterns • Story Problem Strategies: Subtract Ten • Problem Solving Strategies: Look for a Pattern; Model or Act Out • Mental Math Games • You Be the Teacher: Subtraction 	<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
MEASUREMENT AND DATA (MD)		
Measure lengths indirectly and by iterating length units		
<p>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 • Story Problem Strategies: Nonstandard Units of Length 	
<p>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 • Story Problem Strategies: Nonstandard Units of Length • Problem Solving • Problem Solving Strategies: Make and Use a Picture 	<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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Work with time and money.		
<p>1.MD.B.3a. 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; How Long is a Minute? • Tell Time to the Hour • Tell Time to the Half-Hour • Compare Minutes to Hours • Sequence Times • Order Numbers on a Clock • Story Problem Strategies: Time 	<ul style="list-style-type: none"> • Hours and Half-hours.pdf: Tell and write time in hours and half-hours using analog and digital clocks. <ul style="list-style-type: none"> - What Comes After, Before, Or Between? - Make Your Own Clock - Learning to Tell Time - Matching Time - What Numbers are Missing? - What Time Is It? - Time of Day - Clock flashcards
<p>1.MD.B.3b. Identify coins by name and value (pennies, nickels, dimes, and quarters).</p>	<ul style="list-style-type: none"> • Count Quarters, Dimes, Nickels, and Pennies • Song: Money • Book: Bugs For Sale • Quarters, Dimes, Nickels, Pennies • Count Dimes, Nickels, and Pennies • Count Nickels and Pennies or Dimes and Pennies • Quarters 	
Represent and interpret data		
<p>1.MD.C.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	<ul style="list-style-type: none"> • Songs: Tallying; Graphing • Books: One More Cat; Painting by Number • Tally Marks • Problem Solving Strategy: Make a Graph, Make a Table • Graphs • Make a Table • Story Problem Strategies: Graphs 	<ul style="list-style-type: none"> • Data Categorization.pdf: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. <ul style="list-style-type: none"> - Ice Cream Sundae - Make A Real Object Graph - Make a Weather Bar Graph - Weather Flashcards - Our Favorite Foods - Make a Graph - Make a table - How Many? - Bugs! - Use Graphs and Tables - How Big is Your Family?



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
GEOMETRY (G)		
Reason with shapes and their attributes		
1.G.A.1. Distinguish between defining attributes (triangles are closed and 3-sided) versus non-defining attributes (color, orientation, overall size) for two-dimensional shapes; build and draw shapes to possess defining attributes.	<ul style="list-style-type: none"> • Songs: Corners and Sides; Kites • Geoboard • Space Shapes 	
1.G.A.2. Compose two-dimensional shapes or three-dimensional shapes to create a composite shape.	<ul style="list-style-type: none"> • Song: Kites • Space Shapes • Story Problem Strategies: Space Shapes • Geoboard • Tangrams 	
1.G.A.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters. Describe the whole as two of, or four of the shares. Understand that decomposing into more equal shares creates smaller shares.	<ul style="list-style-type: none"> • Song: Fractions • Book: Halves and Fourths and Thirds • Equal-part Fractions • Label Parts of Fractions • Story Problem Strategies: Equal-part Fractions, Label Parts of Fractions 	
SECOND GRADE		
OPERATIONS AND ALGEBRAIC THINKING (OA)		
Represent and solve problems involving addition and subtraction		
2.OA.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown.	<ul style="list-style-type: none"> • Book: Painting by Number • Addition • Subtraction • Problem Solving Strategies: Act Out Addition; Act Out Subtraction • Story Problem Strategies • Missing Addends and Subtrahends • Subtraction Sentences • Addition and Subtraction Facts 	<ul style="list-style-type: none"> • Solving 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 - Act it Out - Guess and Check



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Add and subtract within 20		
<p>2.OA.B.2. Fluently add and subtract within 20. By the end of Grade 2, know from memory all sums of two one-digit numbers.</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Doubles • Mental Math Games: Addition Facts; Missing Addends and Subtrahends; Addition and Subtraction Facts • Speed Games: Addition and Subtraction Facts • Subtraction Patterns • Addition Facts to 20 	<ul style="list-style-type: none"> • Adding and subtracting within 20.pdf: Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers. <i>Sets of flashcards:</i> <ul style="list-style-type: none"> - Addition—horizontal - Subtraction—horizontal - Addition—vertical - Subtraction—vertical - Addition and subtraction—horizontal and vertical
Work with equal groups of objects to gain foundations for multiplication		
<p>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).</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 2's - What's My Number?
<p>2.OA.C.4. Use addition to find the total number of objects arranged in rectangular arrays (with up to 5 rows and 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 	
NUMBER AND OPERATIONS IN BASE TEN (NBT)		
Understand place value		
<p>Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). 2.NBT.A.1a. 100 can be thought of as a bundle of ten tens—called a “hundred.”</p>	<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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Understand place value continued</i>		
<p>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).</p>	<ul style="list-style-type: none"> • Song: Place Value • Place Value of 3-digit Numbers 	<ul style="list-style-type: none"> • Grouping hundreds.pdf: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). <ul style="list-style-type: none"> - My Three-Digit Numbers
<p>2.NBT.A.2. Count within 1,000; skip-count by 5s, 10s, and 100s.</p>	<ul style="list-style-type: none"> • Song: Skip Counting • Skip Count • Skip Count by 10 • Skip Count by 5 • Story Problem Strategies: Skip Count • 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 - My 200 Picture - My 299 Picture - My 300 Picture - My 399 Picture - My 400 Picture - My 499 Picture - My 500 Picture - My 599 Picture - My 600 Picture - My 699 Picture - My 700 Picture - 900 Chart
<p>2.NBT.A.3. Read and write numbers up to 1,000 using base-ten numerals, number names, and expanded form.</p>	<ul style="list-style-type: none"> • Sequences of 2-digit Numbers • Sequences of 3-digit Numbers • Number Chart • Place Value • Number Recognition and Sense 	
<p>2.NBT.A.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Greater Than, Less Than 3-digit • 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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Use place value understanding and properties of operations to add and subtract		
<p>2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	<ul style="list-style-type: none"> • Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction • Add without Regrouping • Add with Regrouping • Subtract without regrouping • Subtract with Regrouping • Speed Games • Mental Math Games 	<ul style="list-style-type: none"> • Adding or subtracting 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 Flashcards - Addition of Two-Digit Numbers - Tic Tac Toe - Subtraction of Two-Digit Numbers
<p>2.NBT.B.6. Add up to three 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>2.NBT.B.7. Demonstrate understanding of addition and subtraction within 1000, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.</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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Use place value understanding and properties of operations to add and subtract continued		
2.NBT.B.8. Mentally add 10 or 100 to a given number in the range of 100–900, and mentally subtract 10 or 100 from a given number in the range of 100–900.	<ul style="list-style-type: none"> • Mental Math Games • Speed Games • 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 (with spinner and numbers cards)
2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (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 • You Be the Teacher • Commutative Properties of Addition • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • Explaining addition and subtraction strategies.pdf: Explain why addition and subtraction strategies work, using place value and the properties of operations. <ul style="list-style-type: none"> - Cube Trails - Race for a Flat - High/Low Number Cube Throw - Lucky Five - Hundreds, Tens, Ones Chart - Numbers Cards
MEASUREMENT AND DATA (MD)		
Measure and estimate lengths in standard units		
2.MD.A.1. Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).	<ul style="list-style-type: none"> • Song: Measuring Plants • 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!
2.MD.A.2. Measure the length of an object twice, using different standard length units for the two measurements; describe how the two measurements relate to the size of the unit chosen. Understand that depending on the size of the unit, the number of units for the same length varies.	<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



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Measure and estimate lengths in standard units <i>continued</i>		
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
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 	
Relate addition and subtraction to length		
2.MD.B.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same unit.	<ul style="list-style-type: none"> • Book: Yangshi's Perimeter • Story Problem Strategies: Standard Units of Length • Addition • Subtraction • Length • Standard Units of Length 	
2.MD.B.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	<ul style="list-style-type: none"> • Number Line • Length 	



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Work with time and money		
<p>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 • You Be the Teacher: Tell Time • Story Problem Strategies: Time to the Quarter Hour; Time to the Minute; Time to Five Minutes; 	
<p>2.MD.C.8. Solve word problems involving collections of money, including dollar bills, quarters, dimes, nickels, and pennies. Record the total using \$ and ¢ appropriately.</p>	<ul style="list-style-type: none"> • Songs: Money; Save Your Pennies • 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 • Story Problem Strategies: Make Change, Count Coins, Count Bills and Coins • You Be the Teacher: Make Change 	<ul style="list-style-type: none"> • 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¢
Represent and interpret data		
<p>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"> • 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!



ARIZONA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Represent and interpret data <i>continued</i>		
<p>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 the graph.</p>	<ul style="list-style-type: none"> • Song: Graphing • Graphing • Bar Graphs • Picture Graphs • Use Graphs and Tables • Story Problem Strategies: Picture Graphs, Bar Graphs 	
GEOMETRY (G)		
Reason with shapes and their attributes		
<p>2.G.A.1. Identify and describe specified attributes of two-dimensional and three-dimensional shapes, according to the number and shape of faces, number of angles, and the number of sides and/or vertices. Draw two-dimensional shapes based on the specified attributes (e.g., triangles, quadrilaterals, pentagons, and hexagons).</p>	<ul style="list-style-type: none"> • Song: Kites • Geoboard • Songs: Shapes, Shapes, Shapes; Corners and Sides • Book: The Shape of Things • Space Shapes • World Shapes • Story Problem Strategies: Space Shapes 	
<p>2.G.A.2. Partition a rectangle into rows and columns of same-size rectangles and count to find the total number of rectangles.</p>	<ul style="list-style-type: none"> • Song: Fractions • Fractions of Regions • Story Problem Strategies: Fractions of Regions, Fractions of Groups • You Be the Teacher: Fractions of Regions 	
<p>2.G.A.3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, fourths, half of, third of, fourth of, and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<ul style="list-style-type: none"> • Song: Fractions • Books: Halves and Fourths and Thirds; The Fraction Twins Fractions • Label Parts of Fractions • Geoboard • Fractions of Regions • Fractions of Groups • Story Problem Strategies: Fractions of Regions, Fractions of Groups • You Be the Teacher: Fractions of Regions, Fractions of Groups 	



PRE-MATH & SCIENCE

Math Books

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; 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



ALBUMS

Beginning Math Songs: Volume 1

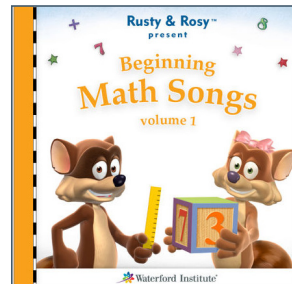
Odd Todd and Even Steven; Salsa Counting; On the Bayou—Addition; Subtract Those Cars; More Than, Fewer Than; A Nice Addition; Marching Band Counting; Doubles 1-5; Multiply by 0

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; Z: The Zulu Warrior

Beginning Reading Songs

Comma, Comma, Comma; Homophone Monkey; Antonym Ant; Apples and Bananas; Old MacDonald's Vowels; ABC Show and Tell Sounds; ABC Tongue Twisters; ABC Picture Sounds; Sheep in the Shadows; C-K Rap; S Steals the Z; Blends; Blicky Licky Land; Apostrophe Pig; Capital Letters—Days; Chip Chop; Adjectives Describe; Lazy Letter Q; Nouns; Verbs; Adverbs; Irregular Verbs; Preposition Ship; 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



Download these albums and more at iTunes. Search for "Waterford's Rusty & Rosy and Friends."

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

MY BACKPACK APP

Mental Math
Read-Alongs
Traditional Tales
Sing-Along Songs
Nursery Rhymes

