

CURRICULUM *Correlation*

*Waterford Early
Learning:*

*Math & Science
and Classroom
Advantage*

100%

*Ohio's Early
Learning and
Development
Standards &
Ohio's Learning
Standards*

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OVERVIEW



This document provides a detailed correlation of WATERFORD EARLY LEARNING: MATH & SCIENCE and CLASSROOM ADVANTAGE to OHIO'S EARLY LEARNING AND DEVELOPMENT STANDARDS: BIRTH TO KINDERGARTEN ENTRY 2012 and OHIO'S LEARNING STANDARDS | MATHEMATICS | 2017.

WATERFORD CURRICULUM DETAILS

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

Waterford Early Learning: Reading is a comprehensive, adaptive program designed to ensure that each student moves from preliteracy to fluent reading. It incorporates five essential reading strands: phonological awareness, phonics, comprehension and vocabulary, language concepts, and fluency. Students take a placement assessment to determine their appropriate starting point.



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 Early Learning: 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. Students begin with a research-based placement assessment.

Waterford Early Learning: SmartStart presents Waterford's curriculum in an integrated format specifically designed for preschoolers. Students explore reading, math, science, and

social and emotional learning activities while practicing executive function skills. Once students complete Waterford Early Learning: SmartStart, they are ready for Waterford Early Learning: Reading and Math & Science.

Note: Preschool students can also begin their Waterford experience with Waterford Early Learning: Reading as it is adaptive.

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.

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

Waterford Early Learning: Classroom Advantage provides teachers thousands of online activities 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 Waterford Early Learning: SmartStart 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 Waterford Early Learning: Classroom Advantage.
- **Print, PDF, and Internet Resources:** Teacher guides, 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.



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES *
PRE-KINDERGARTEN		
DOMAIN: COGNITION AND GENERAL KNOWLEDGE		
Sub-Domain: Mathematics		
<i>Strand: Number Sense</i>		
Topic: Number Sense and Counting		
Count to 20 by ones with increasing accuracy.	<ul style="list-style-type: none"> • Counting Songs • Number Counting • Number Instruction • Counting Puzzle • Order Numbers 	<ul style="list-style-type: none"> • Introduce and Count Number Activities • Unit 2, Pg. 161 Popcorn Number Match • Unit 2, Pg. 243 Central Park Board Game • Unit 5, Pg. 248 Read and Write 9
Identify and name numerals 1-9.	<ul style="list-style-type: none"> • Math Books • Explain Numbers • Number Instruction • Number Practice • Picture Puzzle • Shape Puzzle • Bug Fun • Moving Target 	<ul style="list-style-type: none"> • Introduce and Count Number Activities • Read and Write Activities
Identify without counting small quantities of up to 3 items. (Subitize)	<ul style="list-style-type: none"> • Make and Count Groups • Moving Target (Dots) • Bug Fun • Match Numbers 	<ul style="list-style-type: none"> • Unit 1, Pg. 40 Math: Same Two • Unit 1, Pg. 150 Arrange and Count 4 • Unit 2, Pg. 170 Mad Dash Number Match • Unit 2, Pg. 208 Pizza Chef Match • Unit 7, Pg. 247 How Many Are Hiding?
Demonstrate one-to-one correspondence when counting objects up to 10.	<ul style="list-style-type: none"> • Counting Songs • One-to-One Correspondence • Make and Count Groups • Number Instruction • Number Counting • Bug Fun 	<ul style="list-style-type: none"> • Unit 1, Pg. 5 Attendance • Unit 2, Pg. 261 Make One More • Unit 3, Pg. 335 Tortillas, Tortillas: Family Dinner • Unit 6, Pg. 121 Problem Solving: Fair Division

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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Topic: Number Sense and Counting <i>continued</i>		
Understand that the last number spoken tells the number of objects counted.	<ul style="list-style-type: none"> • Counting Songs • Make and Count Groups • One-to-One Correspondence • Number Instruction • Number Counting • Bug Fun 	<ul style="list-style-type: none"> • Unit 1, Pg. 23 Counting and Attendance • Unit 1, Pg. 150 Arrange and Count 4 • Unit 5, Pg. 148 Practice: Heads or Tails • Unit 5, Pg. 171 Quantities to 7
Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group up to 10	<ul style="list-style-type: none"> • Songs: Greater Than, Less Than; More Than, Fewer Than • Book: For the Birds • Make and Count Groups • Greater Than, Less Than • More Than, Fewer Than 	<ul style="list-style-type: none"> • Unit 2, Pg. 261 Make One More • Unit 5, Pg. 208 Compare and Contrast: Insect and Spider Numbers • Unit 6, Pg. 8 Greater Than • Unit 6, Pg. 60 Read and Write 10
<i>Strand: Number Relationships and Operations</i>		
Topic: Number Relationships		
Count to solve simple addition and subtraction problems with totals smaller than 8, using concrete objects.	<ul style="list-style-type: none"> • Songs: Pirates Can Add; Bakery Subtraction; Circus Subtraction; Addition; On the Bayou; Counting Songs • Books: Five Delicious Muffins; Number Books • Addition • Subtraction • Act Out Addition • Act Out Subtraction • Dominoes • Add Groups • Subtract Groups 	<ul style="list-style-type: none"> • Unit 7, Pg. 180 Build One More • Unit 7, Pg. 229 Build One Less • Unit 7, Pg. 247 How Many Are Hiding?
<i>Strand: Algebra</i>		
Topic: Group and Categorize		
Sort and classify objects by one or more attributes (e.g., size, number).	<ul style="list-style-type: none"> • Songs: All Sorts of Laundry; Savanna Size • Book: Buttons, Buttons • Sort • Size • Order Size • Big and Little • Short and Tall • Heavy and Light 	<ul style="list-style-type: none"> • Unit 1, Pg. 119 Sorting Buttons • Unit 4, Pg. 19 Stack, Slide, Roll • Unit 6, Pg. 114 Length • Unit 7, Pg. 142 Weight • Unit 7, Pg. 199 Volume



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Topic: Patterning		
Recognize, duplicate and extend simple patterns using attributes such as color, shape or size.	<ul style="list-style-type: none"> • Song: Train Station Patterns • Book: How King Snake Got His Pattern • Patterns • Pattern AB • Pattern ABB • Pattern ABC 	
Create patterns.	<ul style="list-style-type: none"> • Song: Train Station Patterns • Patterns • Pattern AB • Pattern ABB • Pattern ABC 	
<i>Strand: Measurement and Data</i>		
Topic: Describe and Compare Measurable Attributes		
Describe and compare objects using measurable attributes (e.g., length, size, capacity and weight).	<ul style="list-style-type: none"> • Song: Savanna Size • Match • Size • Tall and Short • Heavy and Light • Big and Little • Length • Capacity 	<ul style="list-style-type: none"> • Unit 6, Pg. 114 Length • Unit 7, Pg. 136 Exploring Length • Unit 7, Pg. 170 Exploring Weight • Unit 7, Pg. 199 Volume • Unit 7, Pg. 209 Exploring Volume
Order objects by measurable attribute (e.g., biggest to smallest, etc.).	<ul style="list-style-type: none"> • Songs: Savanna Size; Large, Larger, Largest • Match • Size • Order Size • Tall and Short • Heavy and Light • Big and Little • Capacity 	<ul style="list-style-type: none"> • Unit 6, Pg. 114 Length • Unit 7, Pg. 136 Exploring Length • Unit 7, Pg. 170 Exploring Weight • Unit 7, Pg. 199 Volume • Unit 7, Pg. 209 Exploring Volume
Measure length and volume (capacity) using non-standard or standard measurement tools.	<ul style="list-style-type: none"> • Length • Capacity 	<ul style="list-style-type: none"> • Unit 6, Pg. 114 Length • Unit 7, Pg. 136 Exploring Length • Unit 7, Pg. 170 Exploring Weight • Unit 7, Pg. 199 Volume • Unit 7, Pg. 209 Exploring Volume



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Topic: Data Analysis		
Collect data by categories to answer simple questions.	<ul style="list-style-type: none"> • Song: All Sorts of Laundry • Books: One More Cat; Buttons, Buttons • Calendar/Graph Weather 	<ul style="list-style-type: none"> • Unit 1, Pg. 104 Mr. Brown Can Moo! Can You? • Unit 3, Pg. 271 What Comes Next? • Unit 6, Pg. 41 Decomposing 9 • Unit 7, Pg. 147 Charting Weight
<i>Strand: Geometry</i>		
Topic: Spatial Relationships		
Demonstrate understanding of the relative position of objects using terms such as in/on/under, up/down, inside/outside, above/ below, beside/between, in front of/ behind and next to.	<ul style="list-style-type: none"> • Songs: Positioning; Get Over the Bugs; Monster Trucks • Book: Up in the Air • Position • First, Middle, Last • Inside, Outside, Between • Over, Under, Above, Below • Over, Under, and Through • Above, Below, Next to, On 	<ul style="list-style-type: none"> • Unit 2, Pg. 221 Over, Under, Through • Unit 2, Pg. 229 Top, Beside, Bottom • Unit 2, Pg. 260 Bears Above, Below, Next To, On • Unit 5, Pg. 232 Here, Kitty, Kitty: Position Words and Letter Sound /k/
Topic: Identify and Describe Shapes		
Understand and use names of shapes when identifying objects.	<ul style="list-style-type: none"> • Songs: Shapes, Shapes, Shapes; Kites • Books: Imagination Shapes; The Shape of Things • Simple Shapes • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon • Space Shapes • Solid Shapes 	<ul style="list-style-type: none"> • Unit 3, Pg. 289 Rectangles & Squares • Unit 3, Pg. 299 Triangles • Unit 3, Pg. 320 Circles • Unit 3, Pg. 377 Shape Hunt
Name three-dimensional objects using informal, descriptive vocabulary (e.g., “cube” for box, “ice cream cone” for cone, “ball” for sphere, etc.).	<ul style="list-style-type: none"> • Songs: Shapes, Shapes, Shapes; Kites • Books: Imagination Shapes; The Shape of Things • Simple Shapes • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon • Space Shapes • Solid Shapes 	<ul style="list-style-type: none"> • Unit 3, Pg. 340 Sort It Out • Unit 3, Pg. 351 Making Shapes • Unit 3, Pg. 360 Fancy Shapes • Unit 4, Pg. 8 Flat or Solid?



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Topic: Analyze, Compare, and Create Shapes		
Compare two-dimensional shapes, in different sizes and orientations, using informal language.	<ul style="list-style-type: none"> • Songs: Shapes, Shapes, Shapes; Kites; Congruent Parts • Books: Imagination Shapes; The Shape of Things • Similar Figures • Simple Shapes • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon • Congruence • Tangrams • Geoboard 	<ul style="list-style-type: none"> • Unit 3, Pg. 310 Make a Triangle • Unit 3, Pg. 320 Circles • Unit 3, Pg. 332 Circle Party • Unit 3, Pg. 368 Shapes Mural • Unit 3, Pg. 377 Shape Hunt • Unit 4, Pg. 8 Flat or Solid?
Create shapes during play by building, drawing, etc.	<ul style="list-style-type: none"> • Tangrams • Geoboard 	<ul style="list-style-type: none"> • Unit 3, Pg. 310 Make a Triangle • Unit 3, Pg. 320 Circles • Unit 3, Pg. 332 Circle Party • Unit 3, Pg. 368 Shapes Mural • Unit 3, Pg. 377 Shape Hunt
Combine simple shapes to form larger shapes.	<ul style="list-style-type: none"> • Tangrams • Geoboard 	<ul style="list-style-type: none"> • Unit 3, Pg. 310 Make a Triangle • Unit 3, Pg. 320 Circles • Unit 3, Pg. 332 Circle Party • Unit 3, Pg. 368 Shapes Mural
PRE-MATH—KINDERGARTEN		
COUNTING AND CARDINALITY		
Know number names and count the sequence		
K.CC.1 Count to 100 by ones and by tens.	<ul style="list-style-type: none"> • Number Songs • Counting Songs • Math Books (See titles at end of document.) • Number Counting • Order Numbers • 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 - Count By 10s - Numbers 60-69 - I Can Count to 100



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Know number names and count the sequence <i>continued</i>		
K.CC.2 Count forward within 100 beginning from a given number other than 1.	<ul style="list-style-type: none"> • 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 - Flashcards
K.CC.3 Write numerals 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 • 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 - Numbers 1-5 - Add groups - Count on by 1 - Number Writing Practice: 0-20
Count to tell the number of objects		
Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies. K.CC.4a. When counting objects, establish a one-to-one relationship by saying the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	<ul style="list-style-type: none"> • Counting Songs • Number Songs • Math Books (See titles at end of document.) • Number Counting • Order Numbers • One-to-one Correspondence • Make and Count Groups • Number Instruction • 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
K.CC.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.	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence • Number Instruction 	<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
K.CC.4c. Understand that each successive number name refers to a quantity that is one larger (hierarchical inclusion).	<ul style="list-style-type: none"> • Make and Count Groups • Number Counting • Match Numbers • One-to-One Correspondence 	<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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Count to tell the number of objects <i>continued</i>		
<p>K.CC.5. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</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 • 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
Compare numbers		
<p>K.CC.6. Orally identify (without using inequality symbols) whether the number of objects in one group is greater/more than, less/fewer than, or the same as the number of objects in another group, not to exceed 10 objects in each group.</p>	<ul style="list-style-type: none"> • Songs: Greater Than, Less Than; More Than, Fewer Than • Book: For the Birds • Greater Than, Less Than • More Than, Fewer Than • More Than • Fewer Than • Make a Math Story: More Than, Fewer Than 	<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.7. Compare (without using inequality symbols) two numbers between 0 and 10 when presented as written numerals.</p>	<ul style="list-style-type: none"> • Songs: Greater Than, Less Than; More Than, Fewer Than • Book: For the Birds • 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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
OPERATIONS AND ALGEBRAIC THINKING		
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from		
<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds such as claps, acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.).</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 	
<p>K.OA.2 Solve addition and subtraction problems (written or oral), and add and subtract within 10 by using objects or drawings to represent the problem.</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 - Subtraction Flashcards
<p>K.OA.3. Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects and, when appropriate, drawings or equations.</p>	<ul style="list-style-type: none"> • Make and Count Groups • Minuends to 5 • Subtract Groups • Act Out Subtraction • Subtract Doubles to 10 	



OHIO 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.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, when appropriate, an 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 	
<p>K.OA.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 	
NUMBERS AND OPERATIONS IN BASE TEN		
Work with numbers 11-19 to gain foundations for place value.		
<p>K.NBT.1 Compose and decompose numbers from 11 to 19 into a group of ten ones and some further ones by using objects and, when appropriate, drawings or equations; understand that these numbers are composed of a group of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MEASUREMENT AND DATA		
Identify, describe, and compare measurable attributes		
<p>K.MD.1 Identify and describe measurable attributes (length, weight, and height) of a single object using vocabulary terms such as long/short, heavy/light, or tall/short.</p>	<ul style="list-style-type: none"> • Songs: Measuring Plants; Savanna Size • Length • Size • Tall and Short • Heavy and Light • Big and Little 	<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.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. 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 • 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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Classify objects and count the number of objects in each category.		
<p>K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. The number of objects in each category should be less than or equal to ten. Counting and sorting coins should be limited to pennies.</p>	<ul style="list-style-type: none"> • Songs: Same and Different; All Sorts of Laundry • Book: Buttons, Buttons • Match • Sort • Make and Count Groups 	<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		
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).		
<p>K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p>	<ul style="list-style-type: none"> • Songs: Positioning; Kites; Get Over the Bugs; Shapes, Shapes, Shapes • Books: The Shape of Things; Imagination Shapes; Up in the Air • Position • Over, Under, Above, Below • Above, Below, Next to, On • Over, Under, and Through • Inside, Outside, Between • Circle, Square, Triangle, Rectangle • Star, Semicircle, Octagon, Oval, Diamond • Solid Shapes • World Shapes • Story Problem Strategies: Shapes 	<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.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 • 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.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 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Describe, compare, create, and compose shapes		
K.G.4. Describe and compare two- or three-dimensional shapes, in different sizes and orientations, using informal language to describe their commonalities, differences, parts, and other attributes.	<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 	
K.G.5. Model shapes in the world by building shapes from components e.g., sticks and clay balls, and drawing shapes.	<ul style="list-style-type: none"> • Geoboard • Tangrams 	
K.G.6. Combine simple shapes to form larger shapes.	<ul style="list-style-type: none"> • Geoboard • Tangrams 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
BASIC MATH—FIRST GRADE		
OPERATIONS AND ALGEBRAIC THINKING		
Represent and solve problems involving addition and subtraction		
<p>1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</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
<p>1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)</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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Understand and apply properties of operations and the relationship between addition and subtraction		
<p>1.OA.3 Apply properties of operations as strategies to add and subtract. For example, if $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.) Students need not use formal terms for these properties.</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 	
<p>1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.</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 	<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 20		
<p>1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<ul style="list-style-type: none"> • Song: Counting On • Books: Circus 20; Painting by Number • Jump Rope Rhymes • Skip Count by 2 • Count On • Make and Count Groups • Add Groups • Subtract Groups 	<ul style="list-style-type: none"> • Relate counting to addition and subtraction.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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Add and subtract within 20 continued</i>		
<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Strategies may include counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p>	<ul style="list-style-type: none"> • Songs: Fact Families; Counting On • Books: Facts about Families; Circus 20; Painting by Number • Addition and Subtraction Fact Families • Addition Sentences • Subtraction Sentences • Commutative Property of Addition • Addition and Subtraction Relationship • Missing Addends • Missing Minuends and Subtrahends • Add 3 One-digit Numbers • Subtraction Patterns • 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 - Sets of flashcards: <ul style="list-style-type: none"> - Addition—horizontal - Subtraction—horizontal - Addition—vertical - Subtraction—horizontal



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Work with addition and subtraction equations		
<p>1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</p>	<ul style="list-style-type: none"> • Addition Sentences • Subtraction Sentences • Greater Than, Less Than • More Than, Fewer Than 	
<p>1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ? - 3$, $6 + 6 = ?$.</p>	<ul style="list-style-type: none"> • Addition Sentences • Subtraction Sentences • Addition and Subtraction Fact Families • Missing Addends • Missing Minuends and Subtrahends 	
NUMBERS AND OPERATIONS IN BASE TEN		
Extend the counting sequence		
<p>1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</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 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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Understand place value		
<p>1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones—called a “ten;” the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones; and 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"> • Song: Place Value • Place Value of 2-digit Numbers • Expanded Notation • Add with Manipulatives 	<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.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 	
Use place value understanding and properties of operations to add and subtract		
<p>1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Understand that when adding two-digit numbers, tens are added to tens; ones are added to ones; and sometimes it is necessary to compose a ten.</p>	<ul style="list-style-type: none"> • Addition • Add Tens • Doubles • Doubles Plus 1 • Add with Manipulatives • Add Vertical Squares • Add with Beads • Addition and Subtraction Relationship • Flower Story Problems • Story Problem Strategies • 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 - 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



OHIO 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.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p>	<ul style="list-style-type: none"> • Song: Skip Counting • Book: Navajo Beads • Add 10 and 6-10 • Subtract 10 from 10-20 • 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 - Flashcards - Bingo - Addition of Tens
<p>1.NBT.6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>	<ul style="list-style-type: none"> • Subtraction • Subtraction Sentences • Subtract Tens • Subtraction Patterns • Subtract 10 from 10-20 • Act Out Subtraction • Place Value • Addition and Subtraction Relationship • Use Manipulatives • 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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MEASUREMENT AND DATA		
Measure lengths indirectly and by iterating length units		
1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	
1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	<ul style="list-style-type: none"> • Length • Nonstandard Units of Length 	<ul style="list-style-type: none"> • Length Measurement.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
Work with time and money.		
1.MD.3 Work with time and money. a. Tell and write time in hours and half-hours using analog and digital clocks.	<ul style="list-style-type: none"> • Song: Clock Hands • Books: Mr. Romano's Secret: A Time Story; 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 	<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
b. Identify pennies and dimes by name and value.	<ul style="list-style-type: none"> • Songs: Money; Save Your Pennies • Book: Bugs For Sale • Coin Identification • Count Dimes, Nickels, and Pennies • Count Nickels and Pennies or Dimes and Pennies 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Represent and interpret data		
<p>1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</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?
GEOMETRY		
Reason with shapes and their attributes		
<p>1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p>	<ul style="list-style-type: none"> • Songs: Corners and Sides; Kites • Geoboard • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon • Space Shapes • Simple Shapes • Solid Shapes 	
<p>1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. [Students do not need to learn formal names such as “right rectangular prism.”]</p>	<ul style="list-style-type: none"> • Song: Kites • Space Shapes • Story Problem Strategies: Space Shapes • Geoboard • Tangrams • Simple Shapes • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Reason with shapes and their attributes <i>continued</i>		
<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares in real-world contexts. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<ul style="list-style-type: none"> • Song: Fractions • Books: Halves and Fourths and Thirds; Half For You and Half For Me • Equal-part Fractions • Label Parts of Fractions • Story Problem Strategies: Equal-part Fractions, Label Parts of Fractions 	
FLUENT MATH—SECOND GRADE		
OPERATIONS AND ALGEBRAIC THINKING		
Represent and solve problems involving addition and subtraction		
<p>2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>	<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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Add and subtract within 20		
<p>2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers. See standard 1.OA.6 for a list of mental strategies.</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. <ul style="list-style-type: none"> - Sets of flashcards: - 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.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>2.OA.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</p>	<ul style="list-style-type: none"> • Addition • Act Out Addition 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
NUMBERS AND OPERATIONS IN BASE TEN		
Understand place value		
<p>2.NBT.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</p> <ul style="list-style-type: none"> a. 100 can be thought of as a bundle of ten tens—called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 	<ul style="list-style-type: none"> • Song: Place Value • Place Value 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 • 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.2. Count forward and backward within 1000 by ones, tens, and hundreds starting at any number; skip-count by 5s starting at any multiple of 5.</p>	<ul style="list-style-type: none"> • Songs: Skip Counting; Counting Backward; Counting On • Book: A Space Adventure • Count On • Count Down • 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.3. Read and write numbers to 1000 using base-ten numerals, number names, expanded form, and equivalent representations, e.g., 716 is 700 + 10 + 6, or 6 + 700 + 10, or 6 ones and 71 tens, etc.</p>	<ul style="list-style-type: none"> • Sequences of 2-digit Numbers • Sequences of 3-digit Numbers • Number Chart • Place Value 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Understand place value continued</i>		
<p>2.NBT.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</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
<i>Use place value understanding and properties of operations to add and subtract</i>		
<p>2.NBT.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	<ul style="list-style-type: none"> • Place Value • Addition and Subtraction Relationship • Commutative Properties of Addition • Addition • Subtraction • Add without Regrouping • Add with Regrouping • Subtract without regrouping • Subtract with Regrouping • 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.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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Use place value understanding and properties of operations to add and subtract continued</i>		
<p>2.NBT.7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, hundreds are added or subtracted from hundreds, tens are added or subtracted from tens, ones are added or subtracted from 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
<p>2.NBT.8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p>	<ul style="list-style-type: none"> • 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)
<p>2.NBT.9. Explain why addition and subtraction strategies work, using place value and the properties of operations. Explanations may be supported by drawings or objects.</p>	<ul style="list-style-type: none"> • Addition • Subtraction • Add with Regrouping • Subtract with Regrouping • Place Value • Number Line • Addition and Subtraction Relationship • Commutative Properties of Addition • Act Out Addition • Act Out Subtraction 	<ul style="list-style-type: none"> • Explaining addition and subtraction strategies.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



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
MEASUREMENT AND DATA		
Measure and estimate lengths in standard units		
<p>2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</p>	<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!
<p>2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</p>	<ul style="list-style-type: none"> • Length • Standard Units of Length 	<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
<p>2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.</p>	<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
<p>2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</p>	<ul style="list-style-type: none"> • Length • Standard Units of Length 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
Relate addition and subtraction to length		
<p>2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same whole number units, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)</p>	<ul style="list-style-type: none"> • Book: Yangshi's Perimeter • Story Problem Strategies: Standard Units of Length • Addition • Subtraction • Length • Standard Units of Length 	
<p>2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p>	<ul style="list-style-type: none"> • Number Line 	
Work with time and money		
<p>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>	<ul style="list-style-type: none"> • Songs: Telling Time; Clock Hands • Book: How Long Is a Minute? • 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 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
<i>Work with time and money continued</i>		
<p>2.MD.8. Solve problems with money.</p> <p>a. Identify nickels and quarters by name and value.</p> <p>b. Find the value of a collection of quarters, dimes, nickels, and pennies.</p> <p>c. Solve word problems by adding and subtracting within 100, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the \$ and ¢ symbols appropriately (not including decimal notation).</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"> • 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¢
<i>Represent and interpret data</i>		
<p>2.MD.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by creating 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!
<p>2.MD.10. Organize, represent, and interpret data with up to four categories; complete picture graphs when single-unit scales are provided; complete bar graphs when single-unit scales are provided; solve simple put-together, take-apart, and compare problems in a graph.</p>	<ul style="list-style-type: none"> • Song: Graphing • Graphing • Bar Graphs • Picture Graphs • Use Graphs and Tables 	



OHIO STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD TEACHER RESOURCES
GEOMETRY		
Reason with shapes and their attributes		
<p>2.G.1 Recognize and identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides or vertices. Recognize and identify cubes, rectangular prisms, cones, and cylinders.</p>	<ul style="list-style-type: none"> • Songs: Kites; Shapes, Shapes, Shapes; Corners and Sides • Book: The Shape of Things • Circle, Square, Triangle, Rectangle • Oval, Star, Semicircle, Diamond, Octagon • Space Shapes • World Shapes • Story Problem Strategies: Space Shapes 	
<p>2.G.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p>	<ul style="list-style-type: none"> • Song: Fractions • Fractions of Regions • Story Problem Strategies: Fractions of Regions, Fractions of Groups • You Be the Teacher: Fractions of Regions 	
<p>2.G.3. Partition circles and rectangles into two, three, or four equal shares; describe the shares using the words halves, thirds, or fourths and quarters, and use the phrases half of, third of, or fourth of and quarter of. Describe the whole as two halves, three thirds, or four fourths in real-world contexts. 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; Half For You and Half For Me • Fractions • Label Parts of Fractions • 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



SUPPORT

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ALBUMS

Beginning Math Songs: Volume 1

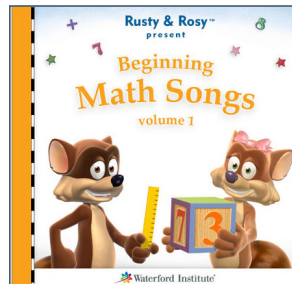
Odd Todd and Even Steven; Salsa Counting; On the Bayou—Addition; Subtract Those Cars; More Than, Fewer Than; A Nice Addition; Marching Band Counting; Doubles 1-5; Multiply by 0

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



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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

