

CURRICULUM *Correlation*

*Waterford
Math & Science
and Classroom
Advantage*

100%

*Michigan K-2
Mathematics
Standards*

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OVERVIEW



This document provides a detailed correlation of WATERFORD MATH & SCIENCE, CLASSROOM ADVANTAGE and MICHIGAN K-2 MATHEMATICS STANDARDS.

WATERFORD CURRICULUM DETAILS

Waterford Curriculum provides technology-driven curriculum for PreK through second grade.

Waterford SmartStart (PreK) includes individualized learning software that adjusts to each child's pace and level. The software combined with the offline materials teach early reading, math, science, and social studies concepts as well as executive function, creative arts, and health and physical development.

Waterford Early Learning (K-2) is a technology-based early reading, math, and science program with integrated assessments and teacher tools.

Waterford Reading is a comprehensive, adaptive reading curriculum designed to help each student develop into 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.

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.

Classroom Advantage (PreK-2) puts Waterford's award-winning, comprehensive online curriculum at teachers' fingertips for whole-class or small-group lessons.

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, individualized learning software adapts automatically to give each student a unique learning experience tailored to his or her own skill level and pace.

Placement Assessment: K-2 students begin their experience with a Placement Tool. Based on rigorous research, the Placement Tool 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.

COLLABORATIVE LEARNING

With Classroom Advantage, Waterford's 10,000 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.

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.](#)

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
KINDERGARTEN		
COUNTING AND CARDINALITY		
Know number names and count the sequence.		
<p>K.CC.1 Count to 100 by ones and by tens.</p>	<ul style="list-style-type: none"> • Songs: (see list at end of document) • Counting Songs: (see list at end of document) • Books (see list at end of document) • Number Counting Extended Practice: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Order Numbers 1-5, 6-10: Instruction, Practice, Assessment, Play & Practice, Application • Order Numbers Extended Play: 0-10, 0-15, 0-20 • Count on by 1: Instruction, Practice, Assessment • Number Sense and Recognition: Instruction (30-39; 40-49; 50-59; 60-69; 70-79; 80-89; 90-99) • Skip Count by 10: Instruction, Extension, Assessment, Practice, Extended Play, Story Problem Solving, Navajo Beans • Bug Bits 1-10 • Moving Target: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Number Instruction, Practice, Assessment: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Picture and Shape Puzzle: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Telephone • Counting Puzzle: 1-10, 11-20 • Dot to Dot: 1-10, 0-9, 6-15, 11-20 • Number Line (0-10): Instruction, Assessment, Extension • Number Line (10-20): Instruction, Assessment, Extension • Greater Than, Less Than (1-digit Numbers) Instruction 	<ul style="list-style-type: none"> • K.CC.1.pdf: Count to 100 by ones and tens. <ul style="list-style-type: none"> - Missing Numbers <i>Practice Pages:</i> <ul style="list-style-type: none"> - Count On By 1 - Numbers 1-5 - Numbers 6-10 - Math Newsletters - Count By 10s - Numbers 60-69 - I Can Count to 100

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Know number names and count the sequence <i>continued</i> .		
<p>K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p>	<ul style="list-style-type: none"> • Count on by 1: Instruction, Practice Assessment • Songs: (see list at end of document) • Counting Puzzle: 1-10, 11-20 • Dot-to-dot: 1-10, 0-9, 6-15, 11-20 • Count On: Instruction, Practice, Assessment, Play & Practice, Counting On 	<ul style="list-style-type: none"> • K.CC.2.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Count On by 1 - Math Newsletter: Count On - Flashcards
<p>K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p>	<ul style="list-style-type: none"> • Number Counting: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Books (see list at end of document) • Counting Songs (see list at end of document) • Moving Target 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Number Instruction, Practice, Assessment 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Number Recognition and Sense 0-9, 10-19, 20-29, 30-39; 40-49: Pre-Assessment, Instruction, Assessment, Practice, Extended Play • Picture and Shape Puzzle: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Counting Puzzle: 0-10, 11-20 • Telephone - Number 9 	<ul style="list-style-type: none"> • K.CC.3.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)

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Count to tell the number of objects.		
<p>K.CC.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"> • Make and Count Groups 1-5: Instruction, Practice, Assessment • Number Counting Extended Practice: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Order Numbers 1-5: Practice, Extended Play • Order Numbers 0-10, 0-15, 0-20: Extended Play • Make and Count Groups 6-10: Instruction, Practice, Assessment • Books (see list at the end of document) • Counting Songs:(see list at the end of document) • Moving Target: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Number Instruction, Practice, Assessment: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 • Number Recognition and Sense 0-9, 10-19, 20-29, 30-39; 40-49: Pre-Assessment, Instruction, Assessment, Practice, Extended Play • Picture and Shape Puzzle: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13,4, 15, 16, 17, 18, 19, 20 • Counting Puzzle: 1-10, 11-20 • Dot-to-dot: 1-10, 0-9, 6-15, 11-20 • Number Chart 0-9, 0-19: Instruction, Assessment, Review 	<ul style="list-style-type: none"> • K.CC.4a.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.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 1-5: Instruction, Practice, Assessment • Make and Count Groups 6-10: Instruction, Practice, Assessment 	<ul style="list-style-type: none"> • K.CC.4b.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.4c. Understand that each successive number name refers to a quantity that is one larger.</p>	<ul style="list-style-type: none"> • Number Recognition and Sense 0-9, 10-19, 20-29, 30-39; 40-49: Pre-Assessment, Instruction, Assessment, Practice, Extended Play 	<ul style="list-style-type: none"> • K.CC.4c.pdf: Understand that each successive number name refers to a quantity that is one larger. <ul style="list-style-type: none"> - Hoop Addition

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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"> • Make and Count Groups 1-5: Instruction, Practice, Assessment • Make and Count Groups 6-10: Instruction, Practice, Assessment • Number Instruction, Practice, Assessment: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 	<ul style="list-style-type: none"> • K.CC.5.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. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p>	<ul style="list-style-type: none"> • More Than, Fewer Than: Instruction, Practice, Assessment, Pre-assessment, Practice & Play • More Than: Introduction, Instruction, Practice, Assessment • Fewer Than: Introduction, Instruction, Practice, Assessment • Make a Math Story: More Than, Fewer Than • Book: For the Birds 	<ul style="list-style-type: none"> • K.CC.6.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 - Grouped Do Count! - More Than, Fewer Than, Equal <p><i>Practice Pages:</i></p> <ul style="list-style-type: none"> - 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 two numbers between 1 and 10 presented as written numerals.</p>	<ul style="list-style-type: none"> • Order Numbers 1-5: Practice, Extended Play, Assessment, Application, Play and Practice • Order Numbers 6-10: Practice, Extended Play, Assessment, Application, Play and Practice • Book: For the Birds • More Than, Fewer Than: Instruction, Practice, Assessment, Pre-assess • Greater Than, Less Than (1-digit Numbers): Pre-assessment, Assessment, Review, Instruction 	<ul style="list-style-type: none"> • K.CC.7.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! <p><i>Practice Pages:</i></p> <ul style="list-style-type: none"> - Greater or Less - Less or Greater - Spinner - Board game - Number cards

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
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"> • Over, Under, Above, Below: Introduction, Instruction, Application, Practice, Assessment • Inside, Outside, Between: Introduction, Instruction, Practice, Assessment, Extended Play • Circle, Square, Triangle, Rectangle: Instruction, Instruction, Application, Play & Practice, Assessment, Review, • Songs: Position; Kites; Get Over the Bugs; Shapes, Shapes, Shapes; Up in the Air • Books: The Shape of Things; Imagination Shapes • Star, Semicircle, Octagon, Oval, Diamond: Instruction, Practice, Assessment, Review • Solid Shapes: Application, Play & Practice • World Shapes: Introduction, Instruction, Practice, Assessment, Assessment 2 • Above, Below, Next to, On: Assessment, Review, Extended Play, Play & Practice, Instruction, Positioning • Story Problem Strategies: Shapes 	<ul style="list-style-type: none"> • K.G.1.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.1. Correctly name shapes regardless of their orientations or overall size.</p>	<ul style="list-style-type: none"> • Circle, Square, Triangle, Rectangle Instruction • Book: The Shape of Things • Songs: Kites; Shapes, Shapes, Shapes • Circle, Square, Triangle, Rectangle: Instruction, Instruction, Application, Play & Practice, Imagination Shapes, Assessment, Review, Kites • Star, Semicircle, Octagon, Oval, Diamond: Instruction, Practice, Assessment, Review • Solid Shapes: Application, Play & Practice • World Shapes: Introduction, Instruction, Practice, Assessment, Assessment 2 • Congruence: Assessment, Review, Extended Play, Play & Practice, Instruction, Congruent Parts • Story Problem Strategies: Shapes 	<ul style="list-style-type: none"> • K.G.2.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

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) <i>continued</i>.		
K.G.3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).	<ul style="list-style-type: none"> • Solid Shapes: Application, Play & Practice • Space Shapes: Play & Practice, Review, Assessment, Instruction 	
Analyze, compare, create, and compose shapes.		
K.G.4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).	<ul style="list-style-type: none"> • Space Shapes: Play & Practice, Assessment, Instruction • Congruence: Assessment, Play & Practice, Instruction, Congruent Parts • Tangrams: Play & Practice • Similar Figures: Assessment, Review, Instruction, Corners and Sides song • 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: Play & Practice • Tangrams: Play & Practice 	
K.G.6. Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”	<ul style="list-style-type: none"> • Geoboard: Play & Practice • Tangrams: Play & Practice 	
MEASUREMENT AND DATA		
Describe and compare measurable attributes.		
K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	<ul style="list-style-type: none"> • Measuring Plants song • Length Instruction and Assessment 	<ul style="list-style-type: none"> • K.MD.1.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Measurable Attributes

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Describe and compare measurable attributes <i>continued</i> .		
<p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.</p>	<ul style="list-style-type: none"> • Order Size: Instruction • Capacity: Introduction, Practice, Assessment • Length: Instruction, Assessment • Songs: Savanna Size, Measuring Plants • Big and Little: Introduction, Instruction, Practice, Assessment • Tall and Short: Introduction, Instruction, Practice, Assessment • Heavy and Light: Introduction, Instruction, Practice, Assessment • Size: Application, Play & Practice • Order Size: Introduction, Practice, Assessment, Application 	<ul style="list-style-type: none"> • K.MD.2.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Big and Little - Tall and Short - Heavy and Light - Small, Medium, Large - Measuring Length - Measurable Attributes
<p>K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. [Limit category counts to be less than or equal to 10.]</p>	<ul style="list-style-type: none"> • Match: Introduction, Instruction, Practice, Assessment • Book: Buttons, Buttons • Matching Application • Songs: Same and Different, All Sorts of Laundry • Sort: Instruction, Practice, Assessment, Review • Logic Game (Sorting) 	<ul style="list-style-type: none"> • K.MD.3.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Sort

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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 (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p>	<ul style="list-style-type: none"> • Add Groups: Instruction, Practice, Assessment, Application, Addition, Review, Extended Play • Subtract Groups: Instruction, Assessment, Application, Subtract Those Cars • Add Groups to 5: Introduction, Instruction, Practice, Assessment, Application, Pirates Can Add • Add Groups to 10: Introduction, Instruction, Practice, Assessment, On the Bayou • Minuends to 5: Introduction, Instruction, Practice, Assessment, Review, Five Delicious Muffins, Bakery Subtraction • Minuends to 9: Introduction, Instruction, Practice, Assessment, Application, Circus Subtraction • Sums to 4-10 and Subtract from 4-9 • Act Out Addition/Subtraction: Instruction, Assessment 	
<p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p>	<ul style="list-style-type: none"> • Add Groups to 5: Instruction, Practice, Assessment, Application, Pirates Can Add Song • Add Groups to 10: Introduction, Instruction, Practice, Assessment, On the Bayou Song • Minuends to 5: Introduction, Instruction, Practice, Assessment, Review, Five Delicious Muffins, Bakery Subtraction • Minuends to 9: Introduction, Instruction, Practice, Assessment, Application, Circus Subtraction • Add Groups: Instruction, Practice, Assessment, Application, Addition, Review, Extended Play • Subtract Groups: Instruction, Assessment, Application, Subtract Those Cars • Sums to 4-10 and Subtract from 4-9 • Act Out Addition/Subtraction: Instruction, Assessment • Flower Story Problems: Add 1 and 1-5; Add 3 and 1-5; Add 5 and 1-5; Add 0 and 1-5; Subtract 2 from 2-7; Subtract 4 from 4-9; Add 0 and 6-10; Add 2 and 6-10; Add 4 and 6-10; Subtract 0 from 6-10; Missing addends; Missing minuends and subtrahends 	<ul style="list-style-type: none"> • K.OA.2.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Act Out Addition - Act Out Subtraction - Addition Newsletter - Subtraction Newsletter - Subtraction Flashcards

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i> .		
K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem <i>continued</i> .	<ul style="list-style-type: none"> • Story Problem Strategies: Add 2 and 1-5; Add 4 and 1-5; Subtract 1 from 1-6; Subtract 3 from 3-8; Subtract 5 from 5-10; Doubles Plus 1, Sums to 10; Doubles, Minuends to 10; Add 1 and 6-10; Add 3 to 6-10; Doubles Sums to 10 	
K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).	<ul style="list-style-type: none"> • Add Groups to 5: Instruction, Practice, Assessment, Application • Add Groups to 10: Introduction, Instruction, Practice, Assessment 	
K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	<ul style="list-style-type: none"> • Missing Addends: Instruction, Assessment • Kingdom of Counting: Missing Addends • Flower Story Problems: Missing Addends • Mental Math Games: Missing Addends, Sums to 10 	
K.OA.5. Fluently add and subtract within 5.	<ul style="list-style-type: none"> • Add Groups to 5: Instruction, Practice, Assessment, Application, Pirates Can Add • Minuends to 5: Introduction, Instruction, Practice, Assessment, Review, Five Delicious Muffins, Bakery Subtraction • Add Groups: Instruction, Practice, Assessment, Application, Addition, Review, Extended Play • Subtract Groups: Instruction, Assessment, Application, Subtract Those Cars • Sums to 4, Sums to 5 • Subtract from 4, Subtract from 5 • Minuends to 9: Circus Subtraction • Sums to 10: On the Bayou • Act Out Addition: Instruction, Assessment • Act Out Subtraction: Instruction, Assessment • Mental Math Games: Add 1 and 1-5; Add 2 and 1-5; Add 3 and 1-5; Add 4 and 1-5; Add 5 and 1-5; Add 0 and 1-5; Subtract 1 from 1-6; Subtract 2 from 2-7; Subtract 3 from 3-8; Subtract 4 from 4-9; Subtract 5 from 5-10; Subtract 0 from 0-5 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from <i>continued</i> .		
K.OA.5. Fluently add and subtract within 5 <i>continued</i> .	<ul style="list-style-type: none"> Speed Games: Add 1 to 1-5 Automaticity; Add 2 to 1-5 Automaticity; Add 3 to 1-5 Automaticity; Add 4 to 1-5 Automaticity; Add 5 to 1-5 Automaticity; Add 0 to 1-5 Automaticity; Subtract 1 from 1-6 Automaticity; Subtract 2 from 2-7 Automaticity; Subtract 3 from 3-8 Automaticity; Subtract 4 from 4-9 Automaticity; Subtract 5 from 5-10 Automaticity; Subtract 0 from 0-5 Automaticity 	
NUMBERS AND OPERATIONS IN BASE 10		
K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation; 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 (10-19) 	<ul style="list-style-type: none"> K.NBT.1.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. <i>Practice Pages:</i> <ul style="list-style-type: none"> Place Value 11-19 Place Value 11-19 (2)
FIRST GRADE		
GEOMETRY		
Reason with shapes and their attributes.		
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.	<ul style="list-style-type: none"> Corners and Sides song 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Reason with shapes and their attributes <i>continued</i>.		
<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"> • Space Shapes: Instruction, Play & Practice, Assessment • Story Problem Strategies: Space Shapes • Geoboard: Play & Practice • Tangrams: Play & Practice 	
<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<ul style="list-style-type: none"> • Halves and Fourths and Thirds • Equal-part Fractions: Extension, Play & Practice • Label Parts of Fractions: Instruction, Assessment, Play & Practice • Story Problem Strategies: Equal-part Fraction, Label Parts of Fractions 	
MEASUREMENT AND DATA		
Measure lengths indirectly and by iterating length units.		
<p>1.MD.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"> • Nonstandard Units: Instruction, Practice, Assessment • Story Problem Strategies: Nonstandard Units 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Measure lengths indirectly and by iterating length units <i>continued</i>.		
<p>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.</p>	<ul style="list-style-type: none"> • Nonstandard Units of Length: Instruction, Review, Extension, Play & Practice, Extended Play, Assessment • Story Problem Strategies: Nonstandard Units of Length • Painting by Number • Problem Solving • Problem Solving Strategies: Make and Use a Picture 	<ul style="list-style-type: none"> • 1.MD.2.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Measure Up! - Inches/Centimeters Rulers
Tell and write time.		
<p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p>	<ul style="list-style-type: none"> • Mr. Romano’s Secret: A Time Story • How Long is a Minute? • Tell Time to the Hour: Introduction, Instruction, Review, Extended Play, Play & Practice, Assessment • Tell Time to the Half-Hour: Introduction, Instruction, Review, Assessment, Extended Play, Play and Practice, Extended Play 2, Play and Practice 2 • Compare Minutes to Hours: Instruction, Review, Play & Practice, Extension, Assessment • Story Problem Strategies: Time • Clock Hands 	<ul style="list-style-type: none"> • 1.MD.3.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - What Numbers are Missing? - What Time Is It? - Time of Day - Clock flashcards

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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"> • Venn Diagrams: The Birds, the Beasts, and the Bat, Instruction, Review, Extended Play, Play & Practice, Assessment • Tally Marks: One More Cat, Instruction, Extension, Play & Practice, Review, Assessment • Problem Solving Strategy: Make a Graph, Make a Table • Graphs: Instruction, Play & Practice, Extended Play, Extension, Review, Assessment • Make a Table: Introduction • Story Problem Strategies: Graphs 	<ul style="list-style-type: none"> • 1.MD.4.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 Flashcard <i>Practice Pages:</i> <ul style="list-style-type: none"> - Our Favorite Foods - Make a Graph - Make a table - How Many? - Bugs! - Use Graphs and Tables - How Big is Your Family?
NUMBERS AND OPERATIONS IN BASE 10		
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"> • Number Chart 0-99: Hooray, Hooray for the One Hundredth Day! book • Count On: Instruction, Practice, Assessment, Extension, Play & Practice, Extended Play • Number Recognition and Sense Instruction: 0-9, 10-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, 90-99 • Number Chart 0-9: Extension • Number Chart 0-19: Extension • Number Chart 0-89: Extended Play • Number Chart 20-29: Instruction, Assessment • Number Chart 30-39: Instruction, Assessment • Number Chart 40-49: Instruction, Assessment • Number Chart 50-59: Instruction, Assessment, Review • Number Chart 60-69: Instruction, Assessment • Number Chart 70-79: Instruction, Assessment • Number Chart 80-89: Instruction, Assessment • Number Chart 90-99: Instruction, Assessment, Review • Counting On song 	<ul style="list-style-type: none"> • 1.NBT.1.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>Practice Pages:</i> <ul style="list-style-type: none"> - 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

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Understand place value.		
1.NBT.2.a 10 can be thought of as a bundle of ten ones—called a “ten.”	<ul style="list-style-type: none"> Place Value: 10-19 song Place Value of 2-digit Numbers: Instruction, EP, Story Problem Strategies 	<ul style="list-style-type: none"> 1.NBT.2a.pdf: 10 can be thought of as a bundle of ten ones—called a “ten.” <ul style="list-style-type: none"> Popsicles to Ten
1.NBT.2.b The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	<ul style="list-style-type: none"> Expanded Notation: Instruction, Play & Practice, Assessment Add with Manipulatives: Add 10 and 6-10 Flower Story Problems: Add 10 and 6-10 Place Value: 10-19 song 	<ul style="list-style-type: none"> 1.NBT.2b.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> Numbers 10-19 More Numbers 10-19
1.NBT.2.c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	<ul style="list-style-type: none"> Expanded Notation: Instruction, Play & Practice, Assessment Story Problem Strategies: Expanded Notation, Place Value Place Value: 10-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, 90-99 Place Value of 2-digit Numbers: Instruction, Practice, Assessment Number Recognition and Sense Review: 10-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, 90-99 	<ul style="list-style-type: none"> 1.NBT.2c.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
1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	<ul style="list-style-type: none"> Greater Than, Less Than (2-digit Numbers): Pre-assessment, Instruction, Play & Practice, Extension, Assessment You Be the Teacher: Greater Than, Less Than 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Use place value understanding and properties of operations to add and subtract.		
<p>1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p>	<ul style="list-style-type: none"> • Addition Introduction • Add Tens: Instruction, Practice, Assessment • Kingdom of Counting: Doubles, Sums to 20; Doubles plus 1, Sums to 20 • Doubles, Sums to 20: Assessment • Doubles Plus 1, Sums to 20: Instruction, Assessment • Add with Manipulatives: Add 3 and 6-10; Add 10 and 6-10 • Add Vertical Squares: Add 2 to 6-10; Add 6 to 6-10; Add 7 to 6-10; Add 8 to 6-10 • Add with Beads Instruction: Add 1 to 6-10; Add 4 to 6-10; Add 5 to 6-10; Add 9 to 6-10 • Flower Story Problems: Add 2 and 6-10; Add 4 and 6-10; Add 10 and 6-10 • Story Problem Strategies: Add 1 and 6-10; Add 3 and 6-10; Add 5 and 6-10; Doubles, Sums to 10; Add 6 and 6-10; Add 7 to 6-10; Add 8 to 6-10; Add 9 to 6-10; Addition Strategy (Doubles, Sums to 20); Addition Strategy (Doubles Plus 1, Sums to 20) • Mental Math Games Missing Addends, and Sums to 20 • Speed Games: Missing Addends, Sums to 10; Missing Addends, Sums to 15; Missing Addends, Sums to 20 • Story Problem Strategies: Add 2-digit without Regrouping; Add 3-digit without Regrouping; 2-digit plus 1-digit with Regrouping; Add 2-digit Numbers with Regrouping; Add 3 Two-digit Numbers with Regrouping; Add 3-digit Numbers with Regrouping; Add with Regrouping • Add 2-digit and 1-digit Numbers with Regrouping: Red Rock, River Rock, Play & Practice, Extended Play • Add 2-digit Numbers without Regrouping: Instruction, Assessment, Review, Extended Play, Play & Practice • Add 3-digit Numbers without Regrouping: Instruction, Assessment, Review, Extended Play, Play & Practice • Add 2-digit and 1-digit Numbers with Regrouping: Instruction, Assessment, Review 	<ul style="list-style-type: none"> • 1.NBT.4.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - 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

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Use place value understanding and properties of operations to add and subtract <i>continued</i> .		
1.NBT.4. <i>continued</i>	<ul style="list-style-type: none"> • Add 3 Two-digit Numbers with Regrouping: Instruction, Assessment, Review, Extended Play, Play & Practice • Add 2-digit Numbers with Regrouping: Instruction, Extended Play, Play & Practice • Add with Regrouping Concept: Instruction, Review, Extension, Play & Practice, Assessment • You Be the Teacher: Add 2-digit Numbers without Regrouping, Add 2-digit Numbers with Regrouping 	
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.	<ul style="list-style-type: none"> • Add 10 and 6-10 Pre-assessment • Subtract 10 from 10-20 Pre-assessment, Assessment • Add 10 and 6-10 Assessment • Kingdom of Counting: Add 10 and 6-10; Subtract 10 from 10-20 Flower Story Problems: Add 10 and 6-10; Subtract 10 from 10-20 	<ul style="list-style-type: none"> • 1.NBT.5.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Subtract 10 - Flashcards - Bingo - Addition of Tens
1.NBT.6. Subtract multiples of 10 in the range z-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.	<ul style="list-style-type: none"> • Subtraction Introduction • Subtraction Sentences: Instruction, Review, Assessment • Subtract Tens: Instruction, Review, Extended Play, Assessment • Subtraction Patterns: Instruction • Subtract 10 from 10-20: Pre-assessment, Assessment • Kingdom of Counting: Subtraction Patterns • Use Manipulatives: Subtract 10 from 10-20 • Flower Story Problems: Subtraction Patterns; Subtract 10 from 10-20 • Story Problem Strategies: Subtract Ten • Problem Solving Strategies: Look for a Pattern • Mental Math Games (Missing Minuends, Differences to 5 and 10): Play & Practice 	<ul style="list-style-type: none"> • 1.NBT.6.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Bingo - Subtract Multiples of 10

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Use place value understanding and properties of operations to add and subtract <i>continued</i> .		
<p>1.NBT.6. Subtract multiples of 10 in the range $z-90$ 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 <i>continued</i>.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Subtract 2-digit without Regrouping; Subtract 3-digit without Regrouping; Subtract 2-digit with Regrouping; Subtract with Regrouping • Subtract 2-digit Numbers without Regrouping: Instruction, Review, Assessment • Subtract 3-digit Numbers without Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • 2-digit Minus 1-digit Numbers with Regrouping: Instruction, Assessment, Play & Practice • Subtract 2-digit Numbers with Regrouping: Instruction, Assessment, Play & Practice • Subtract with Regrouping Concept: Instruction, Extension, Play & Practice, Assessment • You Be the Teacher: Subtract with Regrouping 	
OPERATIONS & 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"> • Problem Solving Strategy: Model or Act Out • Flower Story Problems: Add 1 and 1-5; Add 3 and 1-5; Add 5 and 1-5; Add 0 and 1-5; Subtract 2 from 2-7; Subtract 4 from 4-9; Subtraction Patterns; Add 0 and 6-10; Add 2 and 6-10; Add 4 and 6-10; Subtract 0 from 6-10; Subtract 2 from 8-12; Add 10 and 6-10; Subtract 10 from 10-20; Missing addends; Missing minuends and subtrahends 	<ul style="list-style-type: none"> • 1.OA.1.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. <i>Practice Pages:</i> <ul style="list-style-type: none"> - Guess and Check - Model the Story

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Represent and solve problems involving addition and subtraction <i>continued</i> .		
<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 <i>continued</i>.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Add 2 and 1-5; Add 4 and 1-5; Commutative Property of Addition; Subtraction Sentences; Subtract 1 from 1-6; Subtract 3 from 3-8; Subtract 5 from 5-10; Addition and Subtraction Relationship; Doubles, Sums to 10; Doubles Plus 1, Sums to 10; Doubles, Minuends to 10; Fact Families, Sums to 10; Fact Families, Sums to 20; Number Recognition 20-29; Number Recognition 30-39; Add 1 and 6-10; Add 3 and 6-10; Number Recognition 40-49; Add 5 and 6-10; Number Recognition 50-59; Doubles, Sums to 10; Subtract 1 from 7-11; Subtract 4 from 4-9; Subtract 3 from 9-13; Subtract 4 from 10-14; Subtract 5 from 11-15; Skip Count by 10); Skip Count by 5; Skip Count by 2; Add 6 and 6-10; Add 7 and 6-10; Add 8 and 6-10; Add 9 and 6-10; Number Recognition 80-89; Number Recognition 90-99; Subtract 6 from 6-16); Subtract 7 from 7-17; Subtract 8 from 8-18; Subtract 9 from 9-19; Doubles, Sums to 20; Doubles Plus 1, Sums to 20; Doubles, Minuends to 20; Add 3 One-digit Numbers; Expanded Notation; Add Tens; Subtract Tens 	
<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.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Add 3 One-digit Numbers 	<ul style="list-style-type: none"> • 1.OA.2.pdf: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. <i>Practice Pages:</i> - Draw a Picture

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</p>	<ul style="list-style-type: none"> • Subtraction Patterns: Instruction, Assessment • Commutative Property of Addition: Instruction, Assessment • Kingdom of Counting: Commutative Property of Addition • Mental Math Games: 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: Instruction, Assessment • Subtraction Patterns: Instruction, Assessment • Kingdom of Counting: Missing Minuends and Subtrahends, Missing Addends, Missing Addends to Sums to 10 • Mental Math Games: Missing Addends Sums to 10 	<ul style="list-style-type: none"> • 1.OA.4.pdf: Understand subtraction as an unknown-addend problem. Add and subtract within 20. <i>Worksheet:</i> <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"> • Jump Rope Rhymes • Skip Count by 10: Instruction, Assessment, Extended Play • Skip Count by 2: Instruction, Assessment, Extended Play • Count On: Instruction, Practice, Extended Play, Assessment • Counting On song • Circus 20 book 	<ul style="list-style-type: none"> • 1.OA.5.pdf: Relate counting to addition and subtraction. <ul style="list-style-type: none"> - Skip Counting Chant - Jump Rope Counting <i>4 Practice Pages:</i> <ul style="list-style-type: none"> - Related Facts (p. 40) - Count by 10s (p. 55) - Count by 5s (p. 56) - Count by 2s (p. 57)

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MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p>	<ul style="list-style-type: none"> • Facts about Families book • Fact Families song • Addition Sentences: Instruction, Assessment, Review • Subtraction Sentences: Instruction, Assessment • Addition and Subtraction Relationship: Instruction, Extended Play, Play & Practice, Extension, Assessment • Missing Addends: Instruction, Assessment, Mental Math Games • Missing Minuends and Subtrahends: Instruction, Assessment, Kingdom of Counting, Mental Math Games • Add 3 One-digit Numbers: Instruction, Extension, Review Assessment • Subtraction Patterns: Instruction • Combination of Pre-assessment, Assessment, Mental Math Games, Kingdom of Counting, Use Manipulatives, Add with Manipulatives, Add Vertical Squares, Add with Beads Instruction, Make 10 Addition Strategy, Make 10 Subtraction Strategy, Use Beads: Add 1 and 1-5, Add 2 and 1-5, Add 3 and 1-5, Add 4 and 1-5, Add 5 and 1-5, Add 0 and 1-5, Subtract 1 from 1-6, Subtract 2 from 2-7, Subtract 3 from 3-8, Subtract 4 from 4-9, Subtract 5 from 5-10, Subtract 0 from 0-5, Add 0 and 6-10, Add 1 and 6-10, Add 2 and 6-10, Add 3 and 6-10, Add 4 and 6-10, Add 5 and 6-10, Add 6 and 6-10, Add 7 and 6-10, Add 8 and 6-10, Add 9 and 6-10, Add 10 and 6-10, Subtract 0 from 6-10, Subtract 1 from 7-11, Subtract 2 from 8-12, Subtract 3 from 9-13, Subtract 4 from 10-14, Subtract 5 from 11-15, Subtract 8 from 8-18, Subtract 4 from 4-9, Subtract 9 from 9-19, Subtract 6 from 6-16, Subtract 7 from 7-17, Subtract 8 from 8-18, Subtract 9 from 9-19, Subtract 10 from 10-20, Commutative Property of Addition, Subtraction Patterns, Make 10, Subtract Doubles to 10, Doubles Sums to 10, Doubles Plus 1 Sums to 10, Doubles Sums to 20, Doubles Plus 1 Sums to 20, Subtract Doubles to 20 • Missing Addends, Sums to 10: Mental Math Games • Missing Subtrahends, Differences to 5: Mental Math Games 	<ul style="list-style-type: none"> • 1.OA.6.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 • 20 Practice Pages: <ul style="list-style-type: none"> - 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 • 5 sets of flashcards: <ul style="list-style-type: none"> - Addition—horizontal - Subtraction—horizontal - Addition—vertical - Subtraction—horizontal

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <i>continued.</i></p>	<ul style="list-style-type: none"> • Missing Minuends, Differences to 5: Mental Math Games • Missing Minuends, Differences to 10: Mental Math Games • Kingdom of Counting: Introduction, Final Adventure • Story Problem Strategies: Fact Families, Sums to 10 • Skip Count by 5: Instruction, Extension, Review, Assessment • Skip Count by 2: Instruction, Extension, Extended Play, Review, Assessment • Addition and Subtraction Fact Families to 10: Instruction, Extension, Extended Play, Play & Practice, Review, Assessment, Mental Math Games • Addition and Subtraction Fact Families to 20: Instruction, Extension, Extended Play, Play & Practice, Review, Assessment, Mental Math Games • Facts about Families • Addition Sentences: Instruction, Assessment • Subtraction Sentences: Instruction, Assessment • Addition and Subtraction Relationship: Instruction, Play & Practice, Assessment • Missing Addends: Instruction • Missing Minuends and Subtrahends: Instruction • Add 3 One-digit Numbers: Instruction, Extension, Review Assessment • Subtraction Patterns Instruction • Add 1 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Manipulatives • Add 2 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Manipulatives • Add 3 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Add 4 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Manipulatives 	

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MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <i>continued.</i></p>	<ul style="list-style-type: none"> • Add 5 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Add 0 and 1-5: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 1 from 1-6: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Subtract 2 from 2-7 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use the Number Line • Subtract 3 from 3-8 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Subtract 4 from 4-9: Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Subtract 5 from 5-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 0 from 0-5 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Add 0 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Add 1 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction • Add 2 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add Vertical Squares • Add 3 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Manipulatives • Add 4 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction, Make 10 Addition Strategy • Add 5 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction, Make 10 Addition Strategy 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Add and subtract within 20 <i>continued.</i>		
<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <i>continued.</i></p>	<ul style="list-style-type: none"> • Add 4 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction, Make 10 Addition Strategy • Add 5 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction, Make 10 Addition Strategy • Subtract 0 from 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 1 from 7-11 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 2 from 8-12 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Subtract 3 from 9-13 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Subtract 4 from 10-14 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Beads, Make 10 Subtraction Strategy • Subtract 5 from 11-15 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Beads, Make 10 Subtraction Strategy • Add 6 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add Vertical Squares, Make 10 Addition Strategy, Make 10 Subtraction Strategy • Add 7 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add Vertical Squares, Make 10 Addition Strategy, Make 10 Subtraction Strategy • Add 8 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add Vertical Squares, Make 10 Addition Strategy, Make 10 Subtraction Strategy 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Add and subtract within 20 <i>continued.</i>		
<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <i>continued.</i></p>	<ul style="list-style-type: none"> • Add 9 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Beads Instruction, Make 10 Addition Strategy, Make 10 Subtraction Strategy • Add 10 and 6-10 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Add with Manipulatives • Subtract 6 from 6-16 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 7 from 7-17 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 8 from 8-18 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, • Subtract 9 from 9-19 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Beads • Subtract 10 from 10-20 Pre-assessment, Assessment, Speed Games, Mental Math Games, Kingdom of Counting, Use Manipulatives • Commutative Property of Addition: Assessment, Kingdom of Counting, Mental Math Games, Speed Games • Subtraction Patterns: Assessment, Kingdom of Counting, Mental Math Games • Doubles, Sums to 10: Assessment, Kingdom of Counting, Mental Math Games, Play & Practice, Speed Games • Doubles Plus 1, Sums to 10: Instruction, Assessment, Mental Math Games, Play & Practice • Subtract Doubles to 10: Instruction, Assessment, Kingdom of Counting, Speed Games • Make 10: Assessment, Kingdom of Counting, Mental Math Games, Speed Games, Play & Practice • Doubles, Sums to 20: Assessment, Kingdom of Counting, Mental Math Games, Speed Games • Doubles Plus 1, Sums to 20: Instruction, Mental Math Games, Speed Games, Assessment, Kingdom of Counting • Subtract Doubles to 20: Instruction, Assessment, Kingdom of Counting, Mental Math Games, Speed Games 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <i>continued.</i></p>	<ul style="list-style-type: none"> • Missing Addends: Assessment, Mental Math Games, Play & Practice, Speed Games • Missing Addends, Sums to 10: Mental Math Games, Speed Games • Missing Minuends and Subtrahends: Assessment, Kingdom of Counting, Mental Math Games, Play & Practice • Missing Subtrahends, Differences to 5: Mental Math Games, Play & Practice • Missing Minuends, Differences to 5: Mental Math Games, Play & Practice • Missing Minuends, Differences to 10: Mental Math Games, Play & Practice • Kingdom of Counting: Introduction, Final Adventure • Story Problem Strategies: Subtract 1 from 1-6; Fact Families, Sums to 10 • Skip Count by 5: Instruction, Extension, Review, Assessment • Skip Count by 2: Instruction, Extension, Extended Play, Review, Assessment • Addition and Subtraction Fact Families to 10: Instruction, Extension, Extended Play, Play & Practice, Review, Assessment, Mental Math Games • Addition and Subtraction Fact Families to 20: Instruction, Extension, Extended Play, Play & Practice, Review, Assessment, Mental Math Games, Speed Games • Doubles: 1-5; 6-10 	
<i>Work with addition and subtraction equations.</i>		
<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"> • Circus 20 book • Addition Sentences: Instruction, Review, Assessment • Subtraction Sentences: Instruction, Review, Assessment • Finding the Difference song 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<i>Work with addition and subtraction equations continued.</i>		
1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \quad - 3$, $6 + 6 = \quad$.	<ul style="list-style-type: none"> • Missing Addends: Instruction, Practice, Assessment, Mental Math Games • Missing Minuends and Subtrahends: Instruction, Practice, Assessment, Mental Math Games 	
SECOND GRADE		
GEOMETRY		
<i>Reason with shapes and their attributes.</i>		
2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. [Sizes are compared directly or visually, not compared by measuring.] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	<ul style="list-style-type: none"> • Space Shapes: Instruction, Practice, Assessment, Review • World Shapes: Introduction, Instruction, Practice, Assessment • The Shape of Things book • Shapes, Shapes, Shapes song • Story Problem Strategies: Space Shapes 	
2.G.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	<ul style="list-style-type: none"> • Story Problem Strategies: Fractions of Regions, Fractions of Groups • You Be the Teacher: Fractions of Regions • Fractions Introduction 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Reason with shapes and their attributes <i>continued</i>.		
<p>2.G.3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<ul style="list-style-type: none"> • Halves and Fourths and Thirds Label Parts of Fractions: Assessment • Label Parts of Fractions: Instruction, Play & Practice, Review • Story Problem Strategies: Label Parts of Fractions • Fractions song • Books: The Fraction Twins; Halves, and Fourths and Thirds • Geoboard Extension • Fractions of Regions: Instruction, Review, Assessment, Extended Play • Fractions of Groups: Instruction, Review, Assessment, Extended Play • Story Problem Strategies: Fractions of Regions, Fractions of Groups • You Be the Teacher: Fractions of Regions, Fractions of Groups • Fractions Introduction 	
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"> • Measurement Tools: Instruction, Introduction, Extension, Practice, Assessment, Review • Measuring Plants song • Standard Units of Length: Instruction, Review, Assessment 	<ul style="list-style-type: none"> • 2.MD.1.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - 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"> • 2.MD.2.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

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Measure and estimate lengths in standard units <i>continued</i>.		
2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.	<ul style="list-style-type: none"> Standard Units of Length: Instruction, Review, Extension, Assessment Measuring Plants song Story Problem Strategies: Standard Units of Length 	<ul style="list-style-type: none"> 2.MD.3.pdf: Estimate lengths using units of inches, feet, centimeters, and meters. <ul style="list-style-type: none"> Ready, Set, Measure Treasure Hunt <i>Practice Pages:</i> <ul style="list-style-type: none"> Let's Measure in Centimeters! Let's Measure in Inches! Measuring Perimeter
2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.		<ul style="list-style-type: none"> 2.MD.4.pdf: Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. <ul style="list-style-type: none"> Ready, Set, Measure
Relate addition and subtraction to length.		
2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	<ul style="list-style-type: none"> Story Problem Strategies: Standard Units of Length Book: Yangshi's Perimeter 	
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.	<ul style="list-style-type: none"> Number Line (0-10): Instruction, Extension, Review, Assessment Number Line (10-20): Instruction, Extension, Review, Assessment Problem Solving song 	

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MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
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"> • Telling Time Tell song • Time to Five Minutes: Instruction, Extended Play, Play & Practice, Review, Assessment • Tell Time to the Quarter Hour: Instruction, Extended Play, Play & Practice, Review, Assessment • Tell Time to the Minute: Instruction, Extended Play, Play & Practice, Review, Assessment • Tell Time to the Hour: Play & Practice • Tell Time to the Half-hour: Play & Practice • Story Problem Strategies: Time to Five Minutes, Time to the Quarter Hour, Time to the Minute • You Be the Teacher: Tell Time • Tell Time Introduction 	
<p>2.MD.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?</p>	<ul style="list-style-type: none"> • Money Introduction • Make Change: Instruction, Play & Practice, Review, Extended Play, Assessment • Count Coins: Instruction, Review, Assessment, Extended Play • Count Bills and Coins: Instruction, Review, Extended Play, Play & Practice, Assessment • Story Problem Strategies: Make Change, Count Coins, Count Bills and Coins • You Be the Teacher: Make Change 	<ul style="list-style-type: none"> • 2.MD.8.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Bills and Coins - Let's Count Coins - Money Addition - Change is Good! - Make 45¢

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Represent and interpret data.		
<p>2.MD.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</p>		<ul style="list-style-type: none"> • 2.MD.9.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Let's Measure in Centimeters! - Let's Measure in Inches!
<p>2.MD.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.</p>	<ul style="list-style-type: none"> • Graphing Introduction • Sequences of 3-digit Numbers: The Boonville Nine • Picture Graphs: Instruction, Review, Play & Practice, Assessment, Extended Play • Bar Graphs: Instruction, Review, Extended Play, Assessment Problem Solving Strategies: Use Graphs and Tables • Story Problem Strategies: Picture Graphs, Bar Graphs 	
NUMBERS AND OPERATIONS IN BASE 10		
Understand place value.		
<p>2.NBT.1a. 100 can be thought of as a bundle of ten tens—called a “hundred.” 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"> • Place Value of 3-digit Numbers: Instruction, Practice, Assessment, Story Problem Strategies • Place Value Song 	<ul style="list-style-type: none"> • 2.NBT.1a.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 • 2.NBT.1b.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"> <i>Practice Pages:</i> <ul style="list-style-type: none"> - My Three-Digit Numbers

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Understand place value <i>continued</i>.		
<p>2.NBT.2. Count within 1,000; skip-count by 5s, 10s, and 100s.</p>	<ul style="list-style-type: none"> • Skip Count by 10: Instruction, Assessment, Extended Practice, Extensions • Skip Count by 5: Instruction, Assessment, Extended Practice, Extensions • Skip Counting • Story Problem Strategies: Skip Count • Skip Count: Instruction, Extended Play, Play & Practice, Assessment • Number Sequences and Patterns Introduction 	<ul style="list-style-type: none"> • 2.NBT.2.pdf: Count within 1,000; skip-count by 5s, 10s, and 100s. <ul style="list-style-type: none"> - Chart Patterns <i>Practice Pages:</i> <ul style="list-style-type: none"> - 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 1,000 using base-ten numerals, number names, and expanded form.</p>	<ul style="list-style-type: none"> • Problem Solving Strategies (Make a List): Introduction • Story Problem Strategies: Sequences of 2-digit Numbers; Sequences of 3-digit Numbers; Place Value of 2-digit Numbers; Place Value of 3-digit Numbers • Sequences of 2-digit Numbers: Instruction, Practice, Review, Assessment • Sequences of 3-digit Numbers: Instruction, Practice, Review, Assessment • Place Value of 3-digit Numbers: Instruction, Review, Assessment, Extended Play, Play & Practice 	

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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; Add 3-digit with Regrouping • Greater Than, Less Than (3-digit Numbers): Instruction, Review, Extended Play, Play & Practice, Assessment • Place Value of 3-digit Numbers: Extended Play 	<ul style="list-style-type: none"> • 2.NBT.4.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - 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"> • Mental Math Games (Missing Addends) • Mental Math Games (Missing Addends, Addends to 10) • Mental Math Games (Missing Addends, Sums to 20) • Story Problem Strategies: Add 3 Two-digit Numbers with Regrouping • Add 2-digit and 1-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add 2-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add 3 Two-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • 2-digit Minus 1-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add with Regrouping Concept: Instruction, Extension, Play & Practice, Review, Assessment 	<ul style="list-style-type: none"> • 2.NBT.5.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: Instruction, Extended Play, Assessment, Story Problem Strategies 	<ul style="list-style-type: none"> • 2.NBT.6.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

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Use place value understanding and properties of operations to add and subtract <i>continued</i> .		
<p>2.NBT.7. 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.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Add 3 Two-digit with Regrouping; Add 3-digit with Regrouping; Subtract 2-digit with Regrouping; Subtract 3-digit with Regrouping • Subtract 2-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Subtract 3-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Subtract with Regrouping Concept: Instruction, Review, Extension, Play & Practice, Assessment • Add 3 Two-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add 3-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice 	<ul style="list-style-type: none"> • 2.NBT.7.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - 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"> • 2.NBT.8.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)

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
Use place value understanding and properties of operations to add and subtract <i>continued.</i>		
<p>2.NBT.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.</p>	<ul style="list-style-type: none"> • Story Problem Strategies: Add with Regrouping; Subtract with Regrouping • Add 2-digit and 1-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add 2-digit Numbers with Regrouping: Instruction, Review, Extended Play, Play & Practice • Add 3 Two-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add 3-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • 2-digit Minus 1-digit Numbers with Regrouping: Instruction, Review, Assessment, Extended Play, Play & Practice • Add with Regrouping Concept: Introduction, Extension, Review, Assessment, Play & Practice • Subtract with Regrouping Concept: Introduction, Extension, Review, Assessment, Play & Practice • You Be the Teacher: Add 2-digit without Regrouping; Add with Regrouping, Subtract with Regrouping, Place Value, Subtract 3-digit with Regrouping 	<ul style="list-style-type: none"> • 2.NBT.9.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Hundreds, Tens, Ones Chart - Numbers Cards
OPERATIONS & 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"> • Painting by Number • Story Problem Strategies: Perimeter; Make Change; Picture Graphs; Bar Graphs; Count Coins; Count Bills and Coins; Multiply Using Repeated Addition; Multiply Using Arrays; Patterns of 2-digit Numbers; Patterns of 3-digit Numbers; Place Value of 2-digit Numbers; Place Value of 3-digit Numbers; Greater Than, Less Than 3-digit; Add 2-digit without Regrouping; Add 3-digit without Regrouping; Subtract 2-digit without Regrouping; Subtract 3-digit without Regrouping; 2-digit plus 1-digit with Regrouping; Add 2-digit with Regrouping; Add 3 Two-digit with Regrouping; Add 3-digit with Regrouping; 2-digit Minus 1-digit with Regrouping; Subtract 2-digit with Regrouping; Subtract 3-digit with Regrouping; Add with Regrouping; Subtract with Regrouping 	<ul style="list-style-type: none"> • 2.OA.1.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 <i>Practice Pages:</i> <ul style="list-style-type: none"> - Act it Out - Guess and Check

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MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT 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.</p>	<ul style="list-style-type: none"> Mental Math Games: Add 1 to 1-5; Add 2 to 1-5; Add 3 to 1-5; Add 4 to 1-5; Add 5 to 1-5; Commutative Property of Addition; Add 0 to 1-5; Subtract 1 from 1-6; Subtract 2 from 2-7; Subtract 3 from 3-8; Subtract 4 from 4-9; Subtract 5 from 5-10; Subtraction Patterns; Subtract 0 from 0-5; Addition Strategy (Doubles, Sums to 10); Addition Strategy (Doubles Plus 1, Sums to 10); Subtraction Strategy (Doubles, Minuends to 10); Add 0 to 6-10; Add 1 to 6-10; Add 2 to 6-10; Add 3 to 6-10; Add 4 to 6-10; Add 5 to 6-10; Make 10; Subtract 0 from 6-10; Subtract 1 from 7-11; Subtract 2 from 8-12; Subtract 3 from 9-13; Subtract 4 from 10-14; Subtract 5 from 11-15; Add 6 to 6-10; Add 7 to 6-10; Add 8 to 6-10; Add 9 to 6-10; Add 10 to 6-10; Subtract 6 from 6-16; Subtract 7 from 7-17; Subtract 8 from 8-18; Subtract 9 from 9-19; Subtract 10 from 10-20; Addition Strategy (Doubles, Sums to 20); Addition Strategy (Doubles Plus 1, Sums to 20); Subtraction Strategy (Doubles, Minuends to 20); Add 2-digit Numbers without Regrouping; Missing Minuends and Subtrahends: Greater Than, Less Than (2-digit Numbers); Subtract 2-digit Numbers without Regrouping; Missing Addends; 2-digit Numbers Minus 1-digit Numbers with Regrouping; Add 2-digit and 1-digit Numbers with Regrouping; Subtract 3-digit Numbers without Regrouping; Add 2-digit Numbers with Regrouping; Add 3-digit Numbers with Regrouping 	<ul style="list-style-type: none"> 2.OA.2.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>5 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.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"> Odd Todd and Even Steven song 	<ul style="list-style-type: none"> 2.OA.3.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?

MICHIGAN K-2 MATHEMATICS STANDARDS



MICHIGAN STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<i>Work with equal groups of objects to gain foundations for multiplication continued.</i>		
<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"> • Story Problem Strategies (Multiply Using Repeated Addition) • Story Problem Strategies (Multiply Using Arrays) • Multiply Using Repeated Addition: Instruction, Review Assessment, Extended Play, Play & Practice • Multiply Using Arrays: Instruction, Review, Play & Practice, Assessment 	



MATH & SCIENCE LEVEL ONE

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

MATH & SCIENCE LEVEL TWO

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

MATH & SCIENCE LEVEL THREE

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