K Grade Mathematics Map/Pacing Guide
2019-2020

Topics & Standards
 	
Quarter 1
 	
Time Frame Weeks 1-8
	UNIT 1
	COUNTING AND CARDINALITY
	Know number names and the count sequence.
	● **K.CC.3** Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
	Count to tell the number of objects.
	● **K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies.
	  ○ a. When counting objects, establish a one-to-one relationship by saying the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
	  ○ b. Understand that the last number name said tells the number of objects counted and that the number of objects is the same regardless of the arrangement or the order in which counted.
	Know Number Names and the Count Sequence
	● **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.
	Compare numbers.
	● **K.CC.6** Orally identify (without using inequality symbols) whether the number of objects in one group is greater/more than, less/fewer than, or the same as the number of objects in another group, not to exceed 10 objects in each group.
	● **K.CC.7** Compare (without using inequality symbols) two numbers between 0 and 10 when presented as written numerals.
	
	OPERATIONS AND ALGEBRAIC THINKING
	Understand addition as putting together and adding to, and under- stand subtraction as taking apart and taking from.
	● **K.OA.3** Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects and, when appropriate, drawings or equations.
	● **K.OA.5** Fluently add and subtract within 5.

	UNIT 2 **COUNTING AND CARDINALITY** **Know number names and the count sequence.** ● **K.CC.3** Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **Count to tell the number of objects.** ● **K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies.

K Grade Mathematics Map/Pacing Guide
2019-2020

- a. When counting objects, establish a one-to-one relationship by saying the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- b. Understand that the last number name said tells the number of objects counted and that the number of objects is the same regardless of the arrangement or the order in which counted.

- **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.

OPERATIONS AND ALGEBRAIC THINKING

Understand addition as putting together and adding to, and under- stand subtraction as taking apart and taking from.

- **K.OA.3** Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects and, when appropriate, drawings or equations.

MATH PRACTICE STANDARDS

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

MAJOR **SUPPORTING** **ADDITIONAL**

Students should spend the majority of learning on the major work of the grade level; which should account for at least 65% of the academic year (Achieve the core, n.d.)**. Major content should be emphasized via a greater number of days of instruction, depth and mastery.**

Daily Spiral Review will be incorporated through a combination of computer based i-Ready lessons, math journal activities, skill based reviews and group projects and/or activities.

Spiral Review: Review PK number sense skills: Build perceptual subitizing (ability to identify the number name to a visual: dice model, dot card); Visually identify more and less in quantity when the difference is substantial;

Assessment (Evidence)	*Key Concepts and Skills*	*Curriculum & Textbook Resources*	*Key Concept tools & practices*

K Grade Mathematics Map/Pacing Guide
2019-2020

	Ready Ohio Math Assessment Resources ●Lesson Quiz ●i-Ready Diagnostic (fall, winter, spring) ● Unit Interim Assessment or i-Ready Standards Mastery ●Unit Self-check	➢ Know number names and the count sequence. ○ Count fluently to 100 orally ➢ Count to tell the number of objects. ○ Model numbers with symbols ○ Make connections of number and quantity ○ 1 to 1 correspondence of objects ○ Make sense of a number, its value, and its relationship to the next highest number ○ Show an amount using objects, drawings and symbols ➢ Compare numbers.	**Ready Ohio** **Unit 1 Counting and Cardinality, Numbers 1-5** Lesson 0: Lessons for the first 5 days Lesson 1: Understanding Counting Lesson 2: Count 1, 2, and 3 Lesson 3: Count 4 Lesson 4: Count 5 Lesson 5: Compare within 5 Lesson 6: Make 3, 4, and 5 **Unit 2 Counting and Cardinality, Numbers 6-9** Lesson 7: Count 6 and 7 Lesson 8: Make 6 and 7 Other Resources: • Achieve the Core https://achievethecore.org/category/854/mathematics-lessons • ODE Model Curriculum Resources https://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics	**Available on Teacher Toolbox:** ● Interactive Tutorials ● Prerequisite Ready Lessons ● Tools for Instruction ● Math Center Activities ● Think-Share-Compare Routine (under Program Implementation) ● Ready-Central (Instructional Best Practices Videos ● http://readycentral.com/ ● Journals / Provisional Writing ● Math Models ● Discourse Cards ● Non-linguistic representations ● Resource Selector Tool (under Program Implementation)
Topics & Standards **Quarter 2**	**UNIT 2 CONTINUED** **COUNTING AND CARDINALITY** **Know number names and the count sequence.** ● **K.CC.3** Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **Count to tell the number of objects.** ● **K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies. ○ a. When counting objects, establish a one-to-one relationship by saying the number names in the standard order, pairing each			

K Grade Mathematics Map/Pacing Guide
2019-2020

Time Frame Weeks 1-8	object with one and only one number name and each number name with one and only one object. ○ b. Understand that the last number name said tells the number of objects counted and that the number of objects is the same regardless of the arrangement or the order in which counted. • **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. **OPERATIONS AND ALGEBRAIC THINKING** **Understand addition as putting together and adding to, and under- stand subtraction as taking apart and taking from.** • **K.OA.3** Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects and, when appropriate, drawings or equations.
	UNIT 3 **COUNTING AND CARDINALITY** **Know number names and the count sequence.** • **K.CC.3** Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **Count to tell the number of objects.** • **K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies. ○ a. When counting objects, establish a one-to-one relationship by saying the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. ○ b. Understand that the last number name said tells the number of objects counted and that the number of objects is the same regardless of the arrangement or the order in which counted. ○ c. Understand that each successive number name refers to a quantity that is one larger. • **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. **Compare numbers.** • **K.CC.6** Orally identify (without using inequality symbols) whether the number of objects in one group is greater/more than, less/fewer than, or the same as the number of objects in another group, not to exceed 10 objects in each group. • **K.CC.7** Compare (without using inequality symbols) two numbers between 0 and 10 when presented as written numerals. **OPERATIONS AND ALGEBRAIC THINKING** **Understand addition as putting together and adding to, and under- stand subtraction as taking apart and taking from.** • **K.OA.3** Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using

K Grade Mathematics Map/Pacing Guide
2019-2020

objects
and, when appropriate, drawings or equations.

- **K.OA.4** For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or, when appropriate, an equation.

MAJOR **SUPPORTING** **ADDITIONAL**

Students should spend the majority of learning on the major work of the grade level; which should account for at least 65% of the academic year (Achieve the core, n.d.)**. Major content should be emphasized via a greater number of days of instruction, depth and mastery.**

Daily Spiral Review will be incorporated through a combination of computer based i-Ready lessons, math journal activities, skill based reviews and group projects and/or activities.

Spiral Review: K.CC.3, K.CC.4, K.CC.6
Write numerals (1-20); Represent a number of objects with a numeral; Count using one-to-one correspondence (0-20); Understand the relationship between number and quantity by tagging to count objects; Compare quantities up to 10 objects in each group.

Assessment (Evidence)	*Key Concepts and Skills*	*Curriculum & Textbook Resources*	*Key Concept tools & practices*
Ready Ohio Math Assessment Resources ●Lesson Quiz ●i-Ready Diagnostic (fall, winter, spring) ● Unit Interim Assessment or i-Ready Standards Mastery ●Unit Self-check	➢ Know number names and the count sequence. o Count fluently to 100 orally ➢ Count to tell the number of objects. o Model numbers with symbols o Make connections of number and quantity o 1 to 1 correspondence of objects o Make sense of a number, its value, and its relationship to the next highest number o Show an amount using objects, drawings and symbols ➢ Break down numbers into parts; all possible combinations with objects,	**Ready Ohio** **Unit 2 *Continued* - Counting and Cardinality, Numbers 6-9** Lesson 9: Count 8 and 9 Lesson 10: Make 8 and 9 **Unit 3 Counting and Cardinality, Numbers to 10** Lesson 11: Count 10 Lesson 12: Compare within 10 Lesson 13: Make 10 Other Resources: • Achieve the Core https://achievethecore.org/category/854/mathematics-lessons • ODE Model Curriculum	**Available on Teacher Toolbox:** ● Interactive Tutorials ● Prerequisite Ready Lessons ● Tools for Instruction ● Math Center Activities ● Think-Share-Compare Routine (under Program Implementation) ● Ready-Central (Instructional Best Practices Videos ● http://readycentral.com/ ● Journals / Provisional Writing ● Math Models ● Discourse Cards ● Non-linguistic representations

K Grade Mathematics Map/Pacing Guide
2019-2020

		drawings, and equations ➢ Make ten with numbers 1-9 (1 and 9, 2 and 8 et.al); model with drawings and equations ➢ Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Resources https://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics	• Resource Selector Tool (under Program Implementation)
Topic & Standard **Quarter 3** ***Time Frame Weeks 1-10***	**UNIT 4** **OPERATIONS AND ALGEBRAIC THINKING** **Understand addition as putting together and adding to, and under- stand subtraction as taking apart and taking from.** • **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 – with numbers 10 and less • **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. • **K.OA.5** Fluently add and subtract within 5 **UNIT 5** **NUMBERS AND OPERATIONS IN BASE TEN** **Work with numbers 11–19 to gain foundations for place value.** • **K.NBT.1** Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. **COUNTING AND CARDINALITY** **Know number names and the count sequence.** • **K.CC.1** Count to 100 by ones and by tens. • **K.CC.2** Count forward within 100 beginning from any given number other than 1. • **K.CC.3** Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **Count to tell the number of objects.** • **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		

K Grade Mathematics Map/Pacing Guide
2019-2020

many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

MAJOR **SUPPORTING** **ADDITIONAL**

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Daily Spiral Review will be incorporated through a combination of computer based i-Ready lessons, math journal activities, skill based reviews and group projects and/or activities.

Spiral Review: K.CC.3, K.CC.4, K.OA.3, K.OA.4
Know number names and the count sequence (0-20); Compose and decompose numbers: record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects; For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or, when appropriate, an equation.

Assessment (Evidence)	*Key Concepts and Skills*	*Curriculum & Textbook Resources*	*Key Concept tools & practices*
Ready Ohio Math Assessment Resources ●Lesson Quiz ●i-Ready Diagnostic (fall, winter, spring) ● Unit Interim Assessment or i-Ready Standards Mastery ●Unit Self-check	➢ Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). • ➢ Describe, compare, create, and compose shapes. o Understand the concept of classification o Use attributes of shapes to group or classify ➢ Represent/model addition and subtraction in various ways ➢ Break down numbers into parts o Make all possible combinations with objects, drawings and equations ➢ Make ten with numbers 1-9 o Model with drawings and	**<u>Ready Ohio</u>** **Unit 4 Operations and Algebraic Thinking** Lesson 14: Understand Addition Lesson 15: Add within 5 Lesson 16: Understand Subtraction Lesson 17: Subtract within 5 Lesson 18: Add within 10 Lesson 19: Subtract within 10 Lesson 20: Practice Facts to 5 **Unit 5 Counting and Cardinality, Numbers 11-100 and Number and Operations in Base 10** Lesson 21: Understand Teen Numbers Lesson 22: Count Teen Numbers Lesson 23: Make Teen Numbers	**Available on Teacher Toolbox:** ● Interactive Tutorials ● Prerequisite Ready Lessons ● Tools for Instruction ● Math Center Activities ● Think-Share-Compare Routine (under Program Implementation) ● Ready-Central (Instructional Best Practices Videos ● http://readycentral.com/ ● Journals / Provisional Writing ● Math Models ● Discourse Cards ● Non-linguistic representations ● Resource Selector Tool

K Grade Mathematics Map/Pacing Guide
2019-2020

		equations ➢ Know addition and subtraction facts to 5 ➢ Build foundation for place value: ○ Break apart numbers 11-19 into groups of ten and some more	Lesson 24: Count to 100 by Tens Lesson 25: Count to 100 by Ones Other Resources: • Achieve the Core https://achievethecore.org/category/854/mathematics-lessons • ODE Model Curriculum Resources https://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics	(under Program Implementation)

Topic & Standard

Quarter 4

Time Frame Weeks 1-10

UNIT 6

MEASUREMENT AND DATA

Identify, describe, and compare measurable attributes.

- **K.MD.1** Identify and describe measurable attributes (length, weight, and height) of a single object using vocabulary terms such as long/short, heavy/light, or tall/short.
- **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.

Classify objects and count the number of objects in each category.

- **K.MD.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. The number of objects in each category should be less than or equal to ten. Counting and sorting coins should be limited to pennies.

UNIT 7

GEOMETRY

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

- **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.
- **K.G.2** Correctly name shapes regardless of their orientations or overall size.
- **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Describe, analyze, compare, create, and compose shapes.

K Grade Mathematics Map/Pacing Guide
2019-2020

- **K.G.4** Describe and compare two- or three-dimensional shapes, in different sizes and orientations, using informal language to describe their commonalities, differences, parts, and other attributes.
- **K.G.5** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- **K.G.6** Combine simple shapes to form larger shapes.

MAJOR **SUPPORTING** **ADDITIONAL**

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Daily Spiral Review will be incorporated through a combination of computer based i-Ready lessons, math journal activities, skill based reviews and group projects and/or activities.

Spiral Review: K.CC.1, K.CC.2,K.CC.3, K.CC.4, K.CC.5, K.OA.3, K.OA.4
Count forward to 100 by ones and tens; Count forward to 100 starting at any number; 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;); Compose and decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects; For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or, when appropriate, an equation.

Assessment (Evidence)	*Key Concepts and Skills*	*Curriculum & Textbook Resources*	*Key Concept tools & practices*
Ready Ohio Math Assessment Resources ●Lesson Quiz ●i-Ready Diagnostic (fall, winter, spring) ● Unit Interim Assessment or i-Ready Standards Mastery ●Unit Self-check	➢ Identify, describe, and compare measurable attributes. o Describe positions of shapes using appropriate language ➢ Classify objects and count the number of objects in each category Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). ➢ Describe, compare, create, and compose shapes. ➢ Understand the difference between	**Ready Ohio** **Unit 6 Measurement and Data** Lesson 26: Compare Length Lesson 27: Compare Weight Lesson 28: Compare Objects **Ready Ohio** **Unit 7 Geometry** Lesson 29: See Position and Shape Lesson 30: Name Shapes Lesson 31: Compare Shapes	**Available on Teacher Toolbox:** ● Interactive Tutorials ● Prerequisite Ready Lessons ● Tools for Instruction ● Math Center Activities ● Think-Share-Compare Routine (under Program Implementation) ● Ready-Central (Instructional Best Practices Videos ● http://readycentral.com/ ● Journals / Provisional Writing ● Math Models

K Grade Mathematics Map/Pacing Guide
2019-2020

		two and three dimensional shapes; their size, attributes, and orientations	Lesson 32: Build Shapes Grade K: Additional Fluency Practice Other Resources: • Achieve the Core https://achievethecore.org/category/854/mathematics-lessons	• Discourse Cards • Non-linguistic representations • Resource Selector Tool (under Program Implementation)