Math
Grade Kindergarten

Aligned with Ohio's Learning Standards
for Math (2018)

**Department of Academic Services
Office of Teaching and Learning
Curriculum Division**

COLUMBUS CITY SCHOOLS

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Curriculum Map

Year-at-a-Glance

The Year-at-a-Glance provides the Math Framework and a high-level overview of the course by grading period.
- Link to the Math Framework
- Quarterly Standards Overview by Domain and Cluster

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Scope and Sequence

The Scope and Sequence provides a detailed overview of each grading period, including:
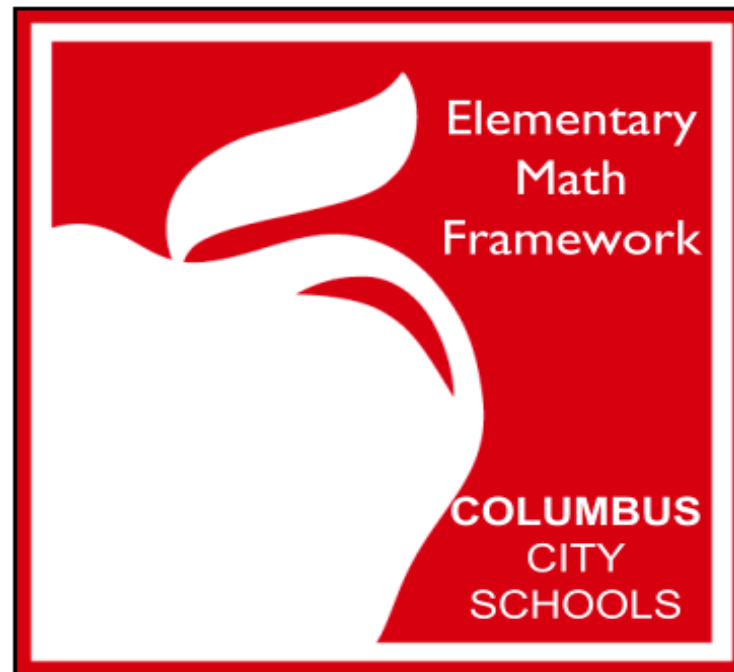- Standards
- Link to Critical Areas of Focus

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Curriculum and Instruction Guide

The Curriculum and Instruction Guide provides direction for standards-based instruction, including:
- Link to the Clear Learning Targets
- Essential Understandings
- Strategies and Approaches
- Assessment Opportunities
- Link to the Model Curriculum
- Timeline
- Mathematical Practices

The Math framework consists of components that support the shifts in mathematics education by the Common Core Standards that are identified in Ohio's Learning Standards for Mathematics. These shifts narrow the focus of topics taught in each grade level to provide for deeper understanding of topics presented, provide the ability to see the coherence of the topics across the grade levels and support more rigorous instruction. The best practices in the framework support these shifts and are applied during all phases of conceptual development. The practices provide students with opportunities to make connections, communicate, and demonstrate mathematical understanding.

Link to CCS Math Framework

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Year-at-a-Glance

Grading Period 1	9 Weeks Counting and Cardinality Operations and Algebraic Thinking	
	Know number names and the count sequence. Count to tell the number of objects. ***K.CC.3** ***K.CC4a-b** ***K.CC.5** ***K.CC.6**	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. ***K.OA.3**

Grading Period 2	9 Weeks Counting and Cardinality Measurement and Data Operations and Algebraic Thinking Geometry			
	Know number names and the count sequence. Count to tell the number of objects. ***K.CC.3** ***K.CC.4.c** ***K.CC.5** ***K.CC.6** ***K.CC.7**	Classify objects and count the number of objects in each category. **K.MD.3**	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. ***K.OA.3** ***K.OA.4**	Identify and describe shapes. Describe, compare, create, and compose shapes. **K.G.1** **K.G.2** **K.G.3** **K.G.4** **K.G.5** **K.G.6**

Grading Period 3	9 Weeks Operations and Algebraic Thinking
	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. *K.OA.1 *K.OA.2 *K.OA.4 *K.OA.5

Grading Period 4	9 Weeks Operations and Algebraic Thinking Number and Operations in Base Ten Counting and Cardinality Measurement and Data			
	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. *K.OA.3	Work with numbers 11-19 to gain foundations for place value. K.NBT.1	Know number names and the count sequence. Count to tell the number of objects. *K.CC.1 *K.CC.2 *K.CC.3 *K.CC.5	Identify, describe, and compare measurable attributes. K.MD.1 K.MD.2

Scope and Sequence and Instructional Supports

Standards: The standards are listed for the grading period and linked to the Clear Learning Targets for that strand under the instructional supports.

Priority Standards: Standards that require emphasis and name the content that should be mastered to ensure a foundation for the following year.

Critical Area of Focus: The critical areas are designed to bring focus to the standards at each grade by describing the big ideas that educators can use to build their curriculum and to guide instruction.

Essential Understandings: Synthesizes what the students should understand - not just know and do - empowering them to connect concepts and knowledge across contents and grades.

Strategies and Approaches: Strategies and approaches are based on the Instructional Focus for the standards provided in the grade level Model Curriculum provided by ODE.

Assessment Opportunities: Assessment opportunities for the standard are samples to consider when checking for understanding. Some examples of formative assessments are verbal opportunities, exit tickets, checklists, written summaries, quizzes, common assessments and student journals.

Lesson Standards: The standards that will be explicitly taught during the daily lesson.

Supporting Standards: Additional standards to be taught in the daily lesson that align with and support mastery of the standards for the lesson.

Mathematical Practices: The Standards for Mathematical Practice describe the skills that mathematics educators should seek to develop in their students. The Mathematical Practices represent a picture of what it looks like for students to understand and do mathematics in the classroom and should be integrated into every mathematics lesson for all students.

* Indicates priority standards for Kindergarten.

indicates a clickable link.

Educator Notes and One-Day Activities for Ohio Enhancement Activities can be found in our resources digital platform.

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Scope and Sequence

Quarter 1		
	Standard	**Link to Ohio's Critical Area of Focus**
*K.CC.3	Write numerals from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	#1 Representing and comparing whole numbers, initially with sets of objects.
*K.CC.4a	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, and pairing each object with one and only one number name and each number name with one and only one object.	
*K.CC.4b	Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies. 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 their arrangement or the order in which they were 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	
*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.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.	

Instructional Supports

Click on the Clear Learning Targets to find vocabulary, learning targets, and sample questions.

	Quarter 1			
Timeframe	**Clear Learning Targets**	**Essential Understandings**	**Strategies and Approaches**	**Assessment Opportunities**
30 days	***K.CC.3***	Know number names and the count sequence. A numerical symbol represents a quantity (including zero).	Identify numerals and their names (from 0 to 20). Write numerals (from 0 to 20). Write a numeral (from 0 to 20) to represent a quantity. Create a set of objects based on the number represented (from 0 to 20).	Write numerals 0-20. Have students create a set of objects and write the numeral that represents the amount. With support and prompting, have students explain their thinking. Have students explain why a set with no objects is represented by the number 0. Provide language support for students when needed.
	K.CC.4a-c	A one-to-one relationship connects one object with one number name and one numeral. Each counted number stated includes all of the previous numbers in a counted set. The last number stated identifies the quantity in a set. When counting by ones, the next	Use concrete objects when counting sets of objects. Model one to one counting using concrete objects. Have students count the number of objects for a given number. Practice counting objects and identifying one more.	Have students produce a set of objects (not to exceed 20), using one-to-one correspondence for a given number. Have students demonstrate how they counted the objects. When given a number, have students build a set that has one more than the number asked.

	number in the sequence increases the quantity by one.	Attend to precision.	
*K.CC.5	The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Use a strategy to count and tell how many objects are in a set regardless of arrangement, size, or type. Use concrete objects when counting sets of objects.	Count a set of objects (up to 20) in an organized arrangement (line, rectangular array, or circle) to answer "how many" questions and justify the answer. Provide language support when having students justify their reasoning. Count a set of objects (up to 10) in a scattered arrangement to answer "how many" questions and justify the answer.
*K.CC.6	The terms greater/more than, less/fewer than, and same as can be used when comparing objects and numerals. The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Identify and compare quantities using objects and numerals. Use strategies such as matching or counting to determine which group is more, less, or the same as another group.	Given two sets of objects, answer inequality questions and justify the answer using grade-level mathematical language with support.
*K.OA.3	There is more than one way to compose or decompose a number.	Use models to compose and decompose numbers 1-10. Explore how a smaller set of objects exists within a larger set. Apply counting strategies when decomposing numbers.	Compose and decompose numbers less than or equal to 10; and explain mathematical thinking using grade-level mathematical language with support..

			Create anchor charts with students to show the different ways to compose and decompose a number.	

[Link to Ohio's Kindergarten Grade Model Curriculum](#)

Timeline

Quarter 1								
Lesson Number	Lesson 0	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5		Lesson 6
Lesson Standards	Introduction of discourse routine	*K.CC.3 *K.CC.4a *K.CC.4b	*K.CC.3 *K.CC.4a *K.CC.4b *K.CC.5	*K.CC.3 *K.CC.4c *K.CC.5	*K.CC.3 *K.CC.6	*K.OA.3	Unit Assessment	*K.CC.3 *K.CC.4a *K.CC.4b *KCC.5
Supporting Standards		*K.CC.4c *K.CC.5	*K.CC.1 *K.CC.4c	*K.CC.1	*K.CC.7	*K.OA.1 *K.OA.2 *K.OA.5 *K.CC.3 *K.CC.4.c *K.CC.5		*K.CC.1 *K.CC.4c

Scope and Sequence

	Quarter 2	
	Standard	
*K.CC.3	Write numerals from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	#1 Representing and comparing whole numbers, initially with sets of objects.
*K.CC.4.c	Understand the relationship between numbers and quantities; connect counting to cardinality using a variety of objects including pennies. 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	
*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.	
K.MD.3	Classify objects into given categories; count the number 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.	
*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.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.	
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, in front of, behind, and next to.*	#2 Describing shape and space.
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")	
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 drawings shapes.	
K.G.6	Combine simple shapes to form larger shapes.	

Instructional Supports

Click on the Clear Learning Targets to find vocabulary, learning targets, and sample questions.

	Quarter 2			
Timeframe	**Clear Learning Targets**	**Essential Understandings**	**Strategies and Approaches**	**Assessment Opportunities**
25 days	*K.CC.3	Know number names and the count sequence. A numerical symbol represents a quantity (including zero).	Identify numerals and their names (from 0 to 20). Write numerals (from 0 to 20). Write a numeral (from 0 to 20) to represent a quantity. Create a set of objects based on the number represented (from 0 to 20).	Write numerals 0-20. Have students create a set of objects and write the numeral that represents the amount. With support and prompting, have students explain their thinking. Have students explain why a set with no objects is represented by the number 0. Provide language support for students when needed.
	*K.CC.4c	When counting by ones, the next number in the sequence increases the quantity by one.	Use concrete objects when counting sets of objects. Practice counting objects and identifying one more. Attend to precision.	When given a number, have students build a set that has one more than the number asked.
	*K.CC.5	The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Use a strategy to count and tell how many objects are in a set regardless of arrangement, size, or type. Use concrete objects when counting sets of	Count a set of objects (up to 20) in an organized arrangement (line, rectangular array, or circle) to answer "how many" questions and justify the answer. Provide language support

			objects.	when having students justify their reasoning. Count a set of objects (up to 10) in a scattered arrangement to answer "how many" questions and justify the answer.
	*K.CC.6	The terms greater/more than, less/fewer than, and same as can be used when comparing objects and numerals. The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Identify and compare quantities using objects and numerals. Use strategies such as matching or counting to determine which group is more, less, or the same as another group.	Given two sets of objects, answer inequality questions and justify the answer using grade-level mathematical language with support.
	*K.CC.7	Compare numbers.	Have students model the two numbers they are comparing. Attend to precision.	Compare two numbers from 0 to 10 when presented as written numerals to identify which is greater or less. Justify the answer using a model and explain using grade-level appropriate mathematical language with supports.
	K.MD.3	Groups of objects can be classified in multiple ways and counted. Classifying objects is the process of sorting objects into categories and naming those categories. Pennies can be used as a manipulative to count and sort.	Use concrete objects to short and count. Classify objects into at least two groups. Accurately use one-to-one correspondence to find the number of objects (within 10) in each category by attending to precision. Gather and sort real-world information.	Have students sort objects into categories based on a given attribute and explain the reasoning by using grade-level appropriate mathematical language with supports.
	*K.OA.3	There is more than one way to	Use models to compose and decompose	Compose and decompose numbers less

		compose or decompose a number.	numbers 1-10. Apply counting strategies when decomposing numbers. Explore how a smaller set of objects exists within a larger set. Create anchor charts with students that show the different ways to compose and decompose numbers.	than or equal to 10 and explain mathematical thinking using models or grade-level mathematical language.
	*K.OA.4	Addition is putting together. A whole number can be decomposed into two (or more) parts. The part-part-whole relationship can be used to find a missing addend.	Use10 frame models. Create an anchor chart with students to represent the ways to compose to make 10. Apply counting strategies when making 10.	Make 10 using different numbers and explain the mathematical thinking through words, models or pictures. Use models to explain mathematical thinking.
21 days	**K.G.2**	Identify and describe shapes (squares, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). Shapes can be identified regardless of size or orientation.	Identify and describe shapes in the environment using a variety of visual representations. Provide lots of opportunities to name shapes regardless of their orientation or overall size. Use concrete models of shapes when exploring. Explore spatial reasoning.	Name shapes regardless of their orientation or overall size and use information mathematical reasoning.
	K.G.3	Shapes can be categorized as	Use concrete models of shapes when	Classify shapes that are

			two-dimensional (flat) or three-dimensional (solid).	classifying shapes. Support students' mathematical language appropriate to the grade level.	two-dimensional and use grad-level mathematical language to justify the thinking. Classify shapes that are three-dimensional and use grade-level mathematical language to justify the thinking.
	K.G.1	Shapes exist in the environment. Shapes can be described by position and location.	Explore and recognize attributes of shapes. Describe the location of shapes in the environment using positional terms such as above, below, beside, etc. Have students act out putting objects above, below, beside, etc.	Using a picture, students draw an object compared to the orientation of another object. Ex. Put a balloon above the bench.
	K.G.4	Shapes can be described by their attributes. Shapes can be compared by their attributes.	Use concrete models when exploring and recognizing attributes of shapes. Describe commonalities and differences of shapes using informal language. Support students' mathematical language appropriate to the grade level. Explore spatial reasoning.	Have students identify shapes according to a given attribute when given several different shapes to choose from. Have students explain their thinking using grade-level appropriate language. Have students identify shapes with like attributes and explain the reasoning using mathematical language appropriate to the grade level.
	K.G.5	Shapes in the environment can be represented with models.	Provide various objects that students can use to build shapes. Model shapes in the environment using a variety of components.	Create a shape using various objects. Use mathematical language appropriate to the grade-level to explain the shape.

| | K.G.6 | Analyze, compare, create and compose shapes.

Shapes can be combined to form larger shapes. | Create models and drawings to represent shapes.

Use concrete shapes to explore combining shapes to make other shapes.

Create models and drawings to represent shapes. | Create a different shape from other shapes. Show more than one way.

Using grade level mathematical language, explain your thinking. |

[Link to Ohio's Kindergarten Grade Model Curriculum](#)

Timeline

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See Educator Notes for Ohio Enhancement Activities</td>
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Scope and Sequence

	Quarter 3	
	Standard	**Link to Ohio's Critical Area of Focus**
*K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds such as claps, acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	#1 Representing and comparing whole numbers, initially with sets of objects.
*K.OA.2	Solve addition and subtraction problems (written or oral), and add and subtract within 10 by using objects or drawings to represent the problem.	
*K.OA.5	Fluently^G add and subtract within 5.	
*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.	

Instructional Supports

Click on the Clear Learning Targets to find vocabulary, learning targets, and sample questions.

		Quarter 3		
Timeframe	**Clear Learning Targets**	**Essential Understandings**	**Strategies and Approaches**	**Assessment Opportunities**
43 days	*K.OA.1	Addition is putting together. Subtraction is taking apart, taking from, or comparing two quantities. There is a relationship between addition and subtraction. Adding 1 results in the next number in a counting sequence. Subtracting 1 results in the previous number in a counting sequence. Adding or subtracting 0 results in the same number. 0 is the number of items left when all the objects in a set are taken away.	Act out situations that represent addition and subtraction. Use concrete objects when representing addition and subtraction situations. Have students draw to represent addition and subtraction. Support students' mathematical language appropriate to the grade level when making connections between concrete and verbal representations. Apply counting strategies to addition and subtraction. Model equations that use 0. Explore the relationship between addition and subtraction.	Match the model to the correct equation. Choose the correct equation that represents the model and use grade-level appropriate mathematical language to explain the reasoning. When given an equation, the students create a model to represent the equation.
	*K.OA.2	Addition is putting together. Subtraction is taking apart, taking from,	Act out to model problems. Use ten frames and counters to model	Students create a model to represent an equation and use grade-level appropriate language to explain the

			or comparing two quantities. There is a relationship between addition and subtraction. There are different problem types: add to (result unknown); take from (result unknown); and put together/take apart (total unknown and both addends unknown). (See Glossary Table 1 of the standards).	addition and subtraction problems. Represent and solve real-world problems using models. Apply counting strategies to addition and subtraction. Support students' mathematical language appropriate to the grade level when making connections between concrete and verbal representations. Explore the relationship between addition and subtraction.	reasoning. From a model, students identify the correct equation and justify their reasoning using grade-level appropriate language.
		*K.OA.5	There is a relationship between addition and subtraction. Adding 1 results in the next number in a counting sequence. Subtracting 1 results in the previous number in a counting sequence. Adding or subtracting 0 results in the same number. 0 is the number of items left when all the objects in a set are taken away. Fluency is the ability to use efficient, accurate, and flexible methods for	Apply counting strategies to addition and subtraction. Act out to model problems. Use five frames and counters to model addition and subtraction problems within 5.. Represent and solve real-world problems using models within 5. Explore the relationship between addition and subtraction.	Students solve real-world problems by creating a model to represent an equation and use grade-level appropriate language to explain the reasoning. From a model, students identify the correct equation to justify their reasoning using grade-level appropriate language.

		computing.		
	*K.OA.4	Addition is putting together. A whole number can be decomposed into two (or more) parts. The part-part-whole relationship can be used to find a missing addend.	Use 10 frame model. Create an anchor chart with students to represent the ways to decompose make 10.	Make 10 using different numbers and explain the mathematical thinking through words, models or pictures. Use models to explain mathematical thinking.

[Link to Ohio's Kindergarten Grade Model Curriculum](#)

Timeline

Quarter 3										
Lesson Number	Lesson 16	Lesson 17	Lesson 18	Lesson 19	Lesson 20		Lesson 21	Lesson 22	Lesson 23	Lesson 24
Lesson Standards	*K.OA.1	*K.OA.2 *K.OA.5	*K.OA.1	*K.OA.2 *K.OA.5	*K.OA.5	Mid-Unit Assessment	*K.OA.2	*K.OA.4	*K.OA.2	*K.OA.2
Supporting Standards	*K.OA.5 *K.CC.3 *K.CC.5 *K.OA.3	*K.CC.3 *K.CC.5 *K.OA.1	*K.CC.3 *K.CC.5 *K.OA.5	*K.CC.3 *K.CC.5 *K.OA.1	*K.CC.3 *K.CC.5 *K.OA.1		*K.CC.3 *K.CC.5 *K.OA.1	*K.CC.3 *K.CC.5	*K.CC.3 *K.CC.5 *K.OA.1	*K.CC.3 *K.CC.5

Scope and Sequence

	Quarter 4	
	Standard	
*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.	#1 Representing and comparing whole numbers, initially with sets of objects.
K.NBT.1	Compose and decompose numbers from 11 to 19 into a group of ten ones and some further ones by using objects and, when appropriate, drawings or equations; understand that these numbers are composed of a group of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	
*K.CC.3	Write numerals from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no 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 many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.	
*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.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.	#2 Describing shapes and space.
K.MD.2	Directly compare two objects with a measurable attribute in common to see which object has "more of" or "less of" the attribute, and describe the difference. *For example, directly compare the heights of two children, and describe one as taller/shorter.*	#1 Representing and comparing whole numbers, initially with sets of objects.

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Instructional Supports

Click on the Clear Learning Targets to find vocabulary, learning targets, and sample questions.

	Quarter 4			
Timeframe	**Clear Learning Targets**	**Essential Understandings**	**Strategies and Approaches**	**Assessment Opportunities**
5 days	*K.OA.3	There is more than one way to compose or decompose a number.	Use models to compose and decompose numbers 1-10. Apply counting strategies when decomposing numbers. Explore how a smaller set of objects exists within a larger set. Create anchor charts with students that show the different ways to compose and decompose numbers.	Compose and decompose numbers less than or equal to 10 and explain mathematical thinking using models or grade-level mathematical language.
25 days	K.NBT.1	The basic unit of the base-ten system is a one. A group of ten consists of ten "ones." Teen numbers are composed of a group of ten ones and more ones.	Use strategies including objects, drawings, and numbers (equations when developmentally appropriate) to compose and decompose numbers from 11 to 19. Use ten objects to represent ten. Explore the structure of teen numbers to recognize a pattern.	Identify the correct model that represents a number and use age appropriate mathematical language to explain the reasoning. Construct a model of a given number and use age appropriate mathematical language to explain the reasoning.

			Use a 10 frame model.	
*K.CC.3	Know number names and the count sequence. A numerical symbol represents a quantity (including zero).	Identify numerals and their names (from 0 to 20). Write numerals (from 0 to 20). Write a numeral (from 0 to 20) to represent a quantity. Create a set of objects based on the number represented (from 0 to 20).	Write numerals 0-20. Have students create a set of objects and write the numeral that represents the amount. With support and prompting, have students explain their thinking. Have students explain why a set with no objects is represented by the number 0. Provide language support for students when needed.
*K.CC.5	The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Use a strategy to count and tell how many objects are in a set regardless of arrangement, size, or type. Use concrete objects when counting sets of objects.	Count a set of objects (up to 20) in an organized arrangement (line, rectangular array, or circle) to answer "how many" questions and justify the answer. Provide language support when having students justify their reasoning. Count a set of objects (up to 10) in a scattered arrangement to answer "how many" questions and justify the answer.
*K.CC.1	Knows number names and the count sequence. There is a standard order of counting.	Play counting games. Use and verbalize the successive number names pattern for counting by ones and decades (by tens) sequence.	Students can orally count by 1's and 10's to 100.

				Count by tens, starting at 10.	
	*K.CC.2	Knows number names and the count sequence. There is a standard order of counting. Counting can begin at any given number.	Use counting routines and vary start numbers when counting.		Given a counting sequence, students are able to identify the number that comes before or after and use grade level appropriate mathematical language to justify their answer.
11 days	**K.MD.1**	Objects have multiple attributes that can be identified and described.	Use concrete objects to explore measurement attributes. Support grade-level appropriate vocabulary, e.g., longer, shorter, taller, heavier, lighter, to describe the differences between two objects.		Students identify the measurable attribute and use grade level mathematical language to explain their reasoning. Provide language support when needed.
	K.MD.2	Objects have common attributes that can be compared.	Use concrete objects to compare two objects that have the same measurement attribute. Use concrete objects to explore the alignment of objects when comparing. Support grade level appropriate vocabulary when comparing measurable attributes, e.g., more of/less of, taller/shorter, heavier/lighter.		When given a measurement attribute, students compare two objects and use appropriate grade level mathematical language to justify their answer. Provide language support when needed.
[Link to Ohio's Kindergarten Grade Model Curriculum](#)					

Timeline

		Quarter 4										
Lesson Number	Lesson 25		Lesson 26	Lesson 27	Lesson 28	Lesson 29	Lesson 30		Lesson 31	Lesson 32	
Lesson Standards	*K.OA.3	Unit Assessment	K.NBT.1	*K.CC.3 *K.CC.5	K.NBT.1	*K.CC1 *K.CC.2	*K.CC.1 *K.CC.2	Unit Assessment	K.MD.1 K.MD.2	K.MD.1 K.MD.2	Unit Assessment
Supporting Standards	*K.CC.3 *K.CC.5 *K.OA.1 *K.OA.2 *K.OA.4		*K.CC.2 *K.CC.3 *K.CC.5	*K.CC.1 *K.CC.4a *K.CC.4b *K.CC.4c K.G.2	*K.CC.2 *K.CC.3 *K.CC.5						

Mathematical Practices

Mathematical Practice Standards Taught Throughout the Year		
1. Make sense of problems and persevere in solving them	**2. Reason abstractly and quantitatively**	**3. Construct viable arguments and critique the reasoning of others**
In Kindergarten, students begin to build the understanding that doing mathematics involves solving problems and discussing how they solved them. Students explain to themselves the meaning of a problem and look for ways to solve it. Real-life experiences should be used to support students' ability to connect mathematics to the world. To help students connect the language of mathematics to everyday life, ask students questions such as "How many students are absent?" or have them gather enough blocks for the students at their table. Younger students may use concrete objects or pictures to help them conceptualize and solve problems. They may check their thinking by asking themselves, "Does this make sense?" or they may try another strategy.	Younger students begin to recognize that a number represents a specific quantity. Then, they connect the quantity to written symbols. Quantitative reasoning entails creating a representation of a problem while attending to the meanings of the quantities. For example, a student may write the numeral 11 to represent an amount of objects counted, select the correct number card 17 to follow 16 on a calendar, or build two piles of counters to compare the numbers 5 and 8. In addition, kindergarten students begin to draw pictures, manipulate objects, or use diagrams or charts to express quantitative ideas. Students need to be encouraged to answer questions such as "How do you know?", which reinforces their reasoning and understanding and helps students develop mathematical language.	Younger students construct arguments using concrete referents, such as objects, pictures, drawings, and actions. They also begin to develop their mathematical communication skills as they participate in mathematical discussions involving questions like "How did you get that?" and "Why is that true?" They explain their thinking to others and respond to others' thinking. They begin to develop the ability to reason and analyze situations as they consider questions such as "Are you sure that ____?", "Do you think that would happen all the time?", and "I wonder why ____?"

Mathematical Practice Standards Taught Throughout the Year		
4. Model with mathematics	**5. Use appropriate tools strategically**	**6. Attend to precision**
In early grades, students experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. Students need opportunities to connect the different representations and explain the connections. They should be able to use all of these representations as needed. For example, a student may use cubes or tiles to show the different number pairs for 5, or place three objects on a 10-frame and then determine how many more are needed to "make a ten." Students rely on manipulatives (or other visual and concrete representations) while solving tasks and record an answer with a drawing or equation.	Younger students begin to consider the available tools (including estimation) when solving a mathematical problem and decide when certain tools might be helpful. For instance, kindergarteners may decide that it might be advantageous to use linking cubes to represent two quantities and then compare the two representations side-by-side or later, make math drawings of the quantities. Students decide which tools may be helpful to use depending on the problem or task and explain why they use particular mathematical tools.	Kindergarten students begin to develop precise communication skills, calculations, and measurements. Students describe their own actions, strategies, and reasoning using grade-level appropriate vocabulary. Opportunities to work with pictorial representations and concrete objects can help students develop understanding and descriptive vocabulary. For example, students analyze and compare two- and three-dimensional shapes and sort objects based on appearance. While measuring objects iteratively (repetitively), students check to make sure that there are no gaps or overlaps. During tasks involving number sense, students check their work to ensure the accuracy and reasonableness of solutions. Students should be encouraged to answer questions such as, "How do you know your answer is reasonable?"

Mathematical Practice Standards Taught Throughout the Year	
7. Look for and make use of structure	**8. Look for and express regularity in repeated reasoning**
Younger students begin to discern a pattern or structure in the number system. For instance, students recognize that 3 + 2 = 5 and 2 + 3 = 5. Students use counting strategies, such as counting on, counting all, or taking away, to build fluency with facts to 5. Students notice the written pattern in the "teen" numbers—that the numbers start with 1 (representing 1 ten) and end with the number of additional ones. Teachers might ask, "What do you notice when ____?"	In the early grades, students notice repetitive actions in counting, computations, and mathematical tasks. For example, the next number in a counting sequence is 1 more when counting by ones and 10 more when counting by tens (or 1 more group of 10). Students should be encouraged to answer questions such as, "What would happen if ____?" and "There are 8 crayons in the box. Some are red and some are blue. How many of each could there be?" Kindergarten students realize 8 crayons could include 4 of each color (8 = 4 + 4), 5 of one color and 3 of another (8 = 5 + 3), and so on. For each solution, students repeatedly engage in the process of finding two numbers to join together to equal 8.