Kindergarten Math
Pacing Guide and Unpacked Standards

GROVEPORT MADISON SCHOOLS

*Pacing Guides were revised Summer 2022

Groveport Madison Math Pacing Guide - Grade K

K	Counting & Cardinality	Operations & Algebraic Thinking	Number & Operations in Base Ten	Measurement & Data	Geometry	Standards for Mathematical Practice
1st 9wks	K.CC.2 - Count forward within 100 from a given number other than 1 K.CC.3 - Write numerals & represent numbers from 0 to 20 K.CC.4 (a,b,c) - Understand relationship of numbers & quantities using a variety of objects K.CC.5 - Count to answer "how many?" up to 20 K.CC.6 - Orally identify if one group of objects is greater/less than or the same as another group (up to 10)	K.OA.3 - Decompose numbers & record compositions in multiple ways for number pairs up to 10				MP.1 - Make sense of problems and persevere in solving them MP.2 - Reason abstractly and quantitatively MP.3 - Construct viable arguments and critique the reasoning of others MP.4 - Model with mathematics MP.5 - Use appropriate tools strategically MP.6 - Attend to precision
2nd 9wks	K.CC.3 - Write numerals & represent numbers from 0 to 20 K.CC.6 - Orally identify if one group of objects is greater/less than or the same as another group (up to 10) K.CC.7 - Compare two written numerals up to 10	K.OA.3 - Decompose numbers & record compositions in multiple ways for number pairs up to 10 K.OA.4 - For any number 1 to 9, find the number that makes 10		K.MD.3 - Classify objects into given categories by count (equal to or less than 10); coins limited to pennies	K.G.1 - Describe objects in the environment using shape names & describe relative positions K.G.2 - Correctly name shapes K.G.3 - Identify 2D & 3D shapes K.G.4 - Describe & compare 2D & 3D shapes K.G.5 - Model shapes by building them from siple materials & by drawing K.G.6 - Combine simple shapes to form larger shapes	MP.7 - Look for and make use of structure MP.8 - Look for and express regularity in repeated reasoning

Groveport Madison Math Pacing Guide - Grade K

K	Counting & Cardinality	Operations & Algebraic Thinking	Number & Operations in Base Ten	Measurement & Data	Geometry	Standards for Mathematical Practice
3rd 9wks		K.OA.1 - Represent addition & subtraction with objects, fingers, etc. K.OA.2 - Solve addition & subtraction problems within 10 using objects and drawing K.OA.5 - Fluently add and subtract within 5				MP.1 - Make sense of problems and persevere in solving them MP.2 - Reason abstractly and quantitatively MP.3 - Construct viable arguments and critique the reasoning of others MP.4 - Model with mathematics MP.5 - Use appropriate tools strategically MP.6 - Attend to precision MP.7 - Look for and make use of structure MP.8 - Look for and express regularity in repeated reasoning
4th 9wks	K.CC.1 - Count to 100 by tens & ones K.CC.2 - Count forward within 100 from a given number other than 1 K.CC.3 - Write numerals & represent numbers from 0 to 20 K.CC.5 - Count to answer "how many?" up to 20 K.CC.6 - Orally identify if one group of objects is greater/less than or the same as another group (up to 10)	K.OA.2 - Solve addition & subtraction problems within 10 using objects and drawing K.OA.3 - Decompose numbers & record compositions in multiple ways for number pairs up to 10 K.OA.4 - For any number 1 to 9, find the number that makes 10	K.NBT.1 - Compose & decompose numbers from 11 to 19 into a group of 10 & further ones using drawings, objects & equations	K.MD.1 - Identify & describe measurable attributes of an object using vocabulary K.MD.2 - Compare two objects using a measurable attribute in common & describe the difference		

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.CC.1	Count to 100 by ones and by tens.	**Common Misconceptions**	**Vocabulary**
		Some students might not see zero as a number. Ask students to write 0 and say zero to represent the number of items left when all items have been taken away. Avoid using the word none to represent this situation.	■ Count ■ Number ■ Five 5 ■ Four 4 ■ Three 3 ■ Two 2 ■ One 1 ■ Zero 0

Essential Question(s)

How high can I count?

Essential Skills

I can count verbally to 100 starting at zero.

I can count verbally to 100 by tens.

	Examples	**Questions**
	"1, 2, 3, 4, . . .	Ask students to count
	"10, 20, 30, 40, . .	Ask students to count

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Students view counting as a mechanism used to land on a number. Young students mimic counting often with initial lack of purpose or meaning. Coordinating the number words, touching or moving objects in a one-to-one correspondence may be little more than a matching activity. However, saying number words as a chant or a rote procedure plays a part in students constructing meaning for the conceptual idea of counting. They will learn how to count before they understand cardinality, i.e. that the last count word is the amount of the set.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	**(Future Grade Standard)**
N/A	N/A

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.CC.2

Count forward within 100 beginning from any given number other than 1.

Common Misconceptions

Some students might not see zero as a number. Ask students to write 0 and say zero to represent the number of items left when all items have been taken away. Avoid using the word none to represent this situation.

Vocabulary

- Count
- Number
- Ten 10
- Nine 9
- Eight 8
- Seven 7
- Six 6

Essential Question(s)

Where can I start counting from?

Essential Skills

I can count forward starting at any number that is given to me from 1 to 100 (other than 1).

Example When given a random 2 digit number, they can count for at least 10	**Question** Generate a random number with a pair of dice and have the student start counting

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Counting on or counting from a given number conflicts with the learned strategy of counting from the beginning. In order to be successful in counting on, students must understand cardinality. Students often merge or separate two groups of objects and then re-count from the beginning to determine the final number of objects represented. For these students, counting is still a rote skill or the benefits of counting on have not been realized. Games that require students to add on to a previous count to reach a goal number encourage developing this concept. Frequent and brief opportunities utilizing counting on and counting back are recommended. These concepts emerge over time and cannot be forced.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard) N/A	**(Future Grade Standard)** N/A

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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).

Common Misconceptions

Some students might not see zero as a number. Ask students to write 0 and say zero to represent the number of items left when all items have been taken away. Avoid using the word none to represent this situation.

Vocabulary

- Eleven 11
- Twelve 12
- Thirteen 13
- Fourteen 14
- Fifteen 15
- Sixteen 16
- Seventeen 17
- Eighteen 18
- Nineteen 19
- Twenty 20
- Show
- Explain
- Represent

Essential Question(s)

How can I write how many objects there are?

Essential Skills

I can write the numbers from 1 to 20.
I can write the number that names how many objects are in the group to 20.
I can show/explain what a group of zero looks like.

Examples	Questions
1, 2, 3, ... 20	Write the numbers from 1-20.
★ ★ ★ ★ is 4.	
"A group of zero has no objects."	Explain why this group has zero blocks.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Like counting to 100 by either ones or tens, writing numbers from 0 to 20 is a rote process. Initially, students mimic the actual formation of the written numerals while also assigning it a name. Over time, children create the understanding that number symbols signify the meaning of counting. Numerals are used to communicate across cultures and through time a certain meaning. Numbers have meaning when children can see mental images of the number symbols and use those images with which to think. Practice count words and written numerals paired with pictures, representations of objects, and objects that represent quantities within the context of life experiences for kindergarteners. For example, dot cards, dominoes and number cubes all create different mental images for relating quantity to number words and numerals. One way students can learn the left to right orientation of numbers is to use a finger to write numbers in air (sky writing). Children will see mathematics as something that is alive and that they are involved. Students should study and write numbers 0 to 20 in this order: numbers 1 to 9, the number 0, then numbers 10 to 20.

They need to know that 0 is the number items left after all items in a set are taken away. Do not accept "none" as the answer to "How many items are left?" for this situation.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.NBT.1 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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 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.

Common Misconceptions

Some students might think that the count word used to tag an item is permanently connected to that item. So when the item is used again for counting and should be tagged with a different count word, the student uses the original count word. For example, a student counts four geometric figures: triangle, square, circle and rectangle with the count words: one, two, three, four. If these items are rearranged as rectangle, triangle, circle and square and counted, the student says these count words: four, one, three, two.

Vocabulary

- Ordinal Number
- Count
- Zero 0
- One 1
- Two 2
- Three 3
- Four 4
- Five 5
- Count
- Name
- Find

Essential Question(s)

How do I know how many objects there are?

Essential Skills

Match each object with one and only one number name and each number with one and only one object.

Say the number names in order while matching each object with a number when counting objects.

Recognize the number of objects is the same regardless of their arrangement or the order in which they were counted.

Realize that the last number name said tells the number of objects counted.

Generalize that each successive number name refers to a quantity that is one larger.

Examples
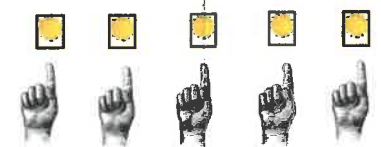
"one", "two", "three", "four", "five"

"This group is one more than the previous group."

"One more than this group is six."

"Even if you move these objects around I know there are five without recounting."

"I can start counting with any object and always get five."

"I know this is a group of five" or "five is the name for this whole group."

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

One of the first major concepts in a student's mathematical development is cardinality. Cardinality, knowing that the number word said tells the quantity you have and that the number you end on when counting represents the entire amount counted. The big idea is that number means amount and, no matter how you arrange and rearrange the items, the amount is the same. Until this concept is developed, counting is merely a routine procedure done when a number is needed. To determine if students have the cardinality rule, listen to their responses when you discuss counting tasks with them. For example, ask, "How many are here?" The student counts correctly and says that there are seven. Then ask, "Are there seven?" Students may count or hesitate if they have not developed cardinality. Students with cardinality may emphasize the last count or explain that there are seven because they counted them. These students can now use counting to find a matching set.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.NBT.1 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.

Common Misconceptions

Some students might not see zero as a number. Ask students to write 0 and say zero to represent the number of items left when all items have been taken away. Avoid using the word none to represent this situation.

Vocabulary

- Count
- Number
- Five 5
- Four 4
- Three 3
- Two 2
- One 1
- Zero 0

Essential Question(s)

What does a numeral represent?

Essential Skills

I can count up to 20 objects that have been arranged in a line, rectangular array, or a circle.
I can count as many as 10 items in a scattered configuration.
I can match each object with one and only one number name and each number with one and only one object.
I can conclude that the last number of the counted sequence signifies the quantity of the counted collection.
Given a number from 1-20, I can count that many objects.

Examples	Questions
When you drop a group of 7 objects on the table, they can count them and tell you how many.	Count this group of counters. How many counters are there?
When you arrange 15 objects in 5 rows of three, the student can count them.	They can count organized counters that are "arranged" in groups up to 20.
"If you tell me to make a group of 16, I can select counters and make that group."	Given a random number from 1 to 20, they can assemble that many counters.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Students develop the understanding of counting and cardinality from experience. Almost any activity or game that engages children in counting and comparing quantities, such as board games, will encourage the development of cardinality. Frequent opportunities to use and discuss counting as a means of solving problems relevant to kindergarteners is more beneficial than repeating the same routine day after day. For example, ask students questions that can be answered by counting up to 20 items before they change and as they change locations throughout the school building.

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(Prior Grade Standard)	1.NBT.1 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.	**Common Misconceptions** Students may look at objects and focus on their size, arrangement, or area when making comparisons between groups.	**Vocabulary** ▪ Equal To ▪ Greater Than ▪ Less Than ▪ Identify ▪ Compare

Essential Question(s)

How are these groups of objects alike and different?

Essential Skills

I can describe greater than, less than, or equal to.

I can determine whether a group of 10 or fewer objects is greater than, less than, or equal to another group of 10 or fewer objects.

Examples	Question
"When I see a group of 5 and a group of 7, I can tell you which group is larger (or smaller) by counting or sometimes by just looking at the arrangement."	Compare these two groups and tell me which one is larger or if they're the same.

Common Core Appendices Support

Include groups with up to ten objects.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

As children develop meaning for numerals, they also compare these numerals to the quantities represented and their number words. The modeling numbers with manipulatives such as dot cards and five- and ten-frames become tools for such comparisons. Children can look for similarities and differences in these different representations of numbers. They begin to "see" the relationship of one more, one less, two more and two less, thus landing on the concept that successive numbers name quantities where one is larger. In order to encourage this idea, children need discussion and reflection of pairs of numbers from 1 to 10. Activities that utilize anchors of 5 and 10 are helpful in securing understanding of the relationships between numbers. This flexibility with numbers will greatly impact children's ability to break numbers into parts.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	(Future Grade Standard)
N/A	N/A

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.CC.7	Compare (without using inequality symbols) two numbers between 0 and 10 presented as written numerals.

Common Misconceptions

Students possibly have misconceptions about comparing the numbers between 0 and 10 when only using written numerals because the numeral is an abstract representation of a quantity.

Students must have mastery of the concrete representations of written numerals and quantities long before they would be asked to compare the written numerals alone.

Vocabulary

- More
- Less
- Greater than
- Less than
- Compare
- Tell

Essential Question(s)

What do I know about these two numbers?

How are these two numbers alike and different?

Essential Skills

I know the quantity of each numeral 0-10.

I can compare written numbers to determine if they are greater than, less than, or equal to each other.

Given two numerals, I can determine which is greater or less than the other.

Examples	Question
"I know that '7' is larger than '5' and even better I know it is '2' larger."	Compare two numbers and tell which is larger or smaller. Even better, they can locate them on the number line.

http://www.darke.k12.oh.us/~carl_jones/FOV2-00108031/S01B8C18D.12/Learning%20Targets%20K%20tabloid.pdf

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Students need to explain their reasoning when they determine whether a number is greater than, less than, or equal to another number. Teachers need to ask probing questions such as "How do you know?" to elicit their thinking. For students, these comparisons increase in difficulty, from greater than to less than to equal. It is easier for students to identify differences than to find similarities.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.NBT.3 (Future Grade Standard)
N/A	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.OA.1 K	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.)	**Common Misconceptions** Students may over-generalize the vocabulary in word problems and think that certain words indicate solution strategies that must be used to find an answer. They might think that the word more always means to add and the words take away or left always means to subtract. When students use the words take away to refer to subtraction and its symbol, teachers need to repeat students' ideas using the words minus or subtract. For example, students use addition to solve this Take from/Start Unknown problem: Seth took the 8 stickers he no longer wanted and gave them to Anna. Now Seth has 11 stickers left. How many stickers did Seth have to begin with?	**Vocabulary** • Four 4 • Five 5 • Six 6 • Seven 7 • Eight 8 • Nine 9 • Add • Subtract • Putting together • Adding to • Taking apart • Taking from • Show • Model
Essential Question(s) What is addition? What is subtraction?			

Essential Skills	I can describe greater than, less than, or equal to. I can determine whether a group of 10 or fewer objects is greater than, less than, or equal to another group of 10 or fewer objects.

Examples	Questions
"I can show 2 + 3 by putting counters out and showing the total of 5". "I can show 7 - 4 by having 7 students stand in a group and then have 4 students walk away".	Show 3 + 5 two different ways. Model 7 – 2 two different ways.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Provide contextual situations for addition and subtraction that relate to the everyday lives of kindergarteners. A variety of situations can be found in children's literature books. Students then model the addition and subtraction using a variety of representations such as drawings, sounds, acting out situations, verbal explanations and numerical expressions. Manipulatives, like two-color counters, clothespins on hangers, connecting cubes and stickers can also be used for modeling these operations. Kindergarten students should see addition and subtraction equations written by the teacher. Although students might struggle at first, teachers should encourage them to try writing the equations. Students' writing of equations in Kindergarten is encouraged, but it is not required.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.OA.1 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

| 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. | **Common Misconceptions**

Students may over-generalize the vocabulary in word problems and think that certain words indicate solution strategies that must be used to find an answer.

They might think that the word more always means to add and the words take away or left always means to subtract. | **Vocabulary**

- Add
- In All
- Join
- Are Left
- Subtract
- Take Away
- Solve
- Use |
|---|---|---|---|
| **Essential Question(s)**

How can I show addition?

How can I show subtraction? | | When students use the words take away to refer to subtraction and its symbol, teachers need to repeat students' ideas using the words minus or subtract. For example, students use addition to solve this Take from/Start Unknown problem: Seth took the 8 stickers he no longer wanted and gave them to Anna.
Now Seth has 11 stickers left. How many stickers did Seth have to begin with? | |
| **Essential Skills** | I can add and subtract within 10. (maximum sum and minuend is 10)

I can use objects/drawing to represent an addition and subtraction word problem.

I can solve addition and subtraction word problems within 10. | | |

Example	Question
The student can consistently solve addition and subtraction and word problems.	"Billy has 6 hats and Sally has 4 hats. Who has more? How many more?

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Provide contextual situations for addition and subtraction that relate to the everyday lives of kindergarteners. A variety of situations can be found in children's literature books. Students then model the addition and subtraction using a variety of representations such as drawings, sounds, acting out situations, verbal explanations and numerical expressions. Manipulatives, like two-color counters, clothespins on hangers, connecting cubes and stickers can also be used for modeling these operations. Kindergarten students should see addition and subtraction equations written by the teacher. Although students might struggle at first, teachers should encourage them to try writing the equations. Students' writing of equations in Kindergarten is encouraged, but it is not required.

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(Prior Grade Standard)	1.OA.2 (Future Grade Standard)
N/A	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. Drawings need not show details, but should show the mathematics in the problems. (This applies wherever drawings are mentioned in the Standards.)

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.

Common Misconceptions

If students' progress from working with manipulatives to writing numerical expressions and equations, they skip using pictorial thinking. Students will then be more likely to use finger counting and rote memorization for work with addition and subtraction.

Counting forward builds to the concept of addition while counting back leads to the concept of subtraction. However, counting is an inefficient strategy. Teachers need to provide instructional experiences so that students' progress from the concrete level, to the pictorial level, then to the abstract level when learning mathematical concepts.

Vocabulary

- Add
- In All
- Join
- Are Left
- Subtract
- Take Away
- Plus Sign +
- Minus Sign −
- Equals Sign =
- Break apart
- Put together
- Equation
- Decompose
- Record

Essential Question(s)

How can addition help show a number in a different way?

Essential Skills

I can solve addition number sentences within 10.

I can decompose numbers less than or equal to 10 into pairs in more than one way.

I can record decomposition of a number within 10 by a drawing or written equation.

Example	**Question**
Seven can be 3 and 4, 5 and 2, 4 and 3, 7 and 1, 0 and 7, . . ."	The student can fluency and flexible thinking to decompose any number from 1 to 10.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Provide contextual situations for addition and subtraction that relate to the everyday lives of kindergarteners. A variety of situations can be found in children's literature books. Students then model the addition and subtraction using a variety of representations such as drawings, sounds, acting out situations, verbal explanations and numerical expressions. Manipulatives, like two-color counters, clothespins on hangers, connecting cubes and stickers can also be used for modeling these operations. Kindergarten students should see addition and subtraction equations written by the teacher. Although students might struggle at first, teachers should encourage them to try writing the equations. Students' writing of equations in Kindergarten is encouraged, but it is not required.

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(Prior Grade Standard)	**1.OA.3 (Future Grade Standard)**
N/A	Apply properties of operations as strategies to add and subtract. *For example, if 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative Property of Addition.); to add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative Property of Addition).* Students need not use formal terms for these properties.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.OA.4	For any number from 1 to 9, find the number that makes 10 when added to the number, e given number, e.g., by using objects or drawings, and record the answer with a drawing or, when appropriate, an equation.	**Common Misconceptions** If students' progress from working with manipulatives to writing numerical expressions and equations, they skip using pictorial thinking. Students will then be more likely to use finger counting and rote memorization for work with addition and subtraction. Counting forward builds to the concept of addition while counting back leads to the concept of subtraction. However, counting is an inefficient strategy. Teachers need to provide instructional experiences so that students' progress from the concrete level, to the pictorial level, then to the abstract level when learning mathematical concepts.	**Vocabulary** ▪ Add ▪ Plus Sign + ▪ Equals Sign = ▪ Ten ▪ Equation ▪ Find ▪ Record
Essential Question(s) How many more will make 10?			

Essential Skill	I know that two numbers can be added together to make ten. Using materials or representations, I can find the number that makes 10 when added to the given number for any number from 1 to 9, and record the answer using materials, representations, or equations.

Example	Question
"I know it takes three more to make 7 into 10. I can show that using 7 + 3 = 10, a ten frame chart, and using groups of counters".	If you have 6, how many more do you need to make 10? Can you show me how you know?

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Create written addition or subtraction problems with sums and differences less than or equal to 10 using the numbers 0 to 10 and Table 1 on page 88 of the Common Core State Standards (CCSS) for Mathematics for guidance. It is important to use a problem context that is relevant to kindergarteners. After the teacher reads the problem, students choose their own method to model the problem and find a solution. Students discuss their solution strategies while the teacher represents the situation with an equation written under the problem. The equation should be written by listing the numbers and symbols for the unknown quantities in the order that follows the meaning of the situation. The teacher and students should use the words equal and is the same as interchangeably.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.OA.4 (Future Grade Standard)
N/A	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.OA.5	Fluently add and subtract within 5.

Common Misconceptions

If students' progress from working with manipulatives to writing numerical expressions and equations, they skip using pictorial thinking. Students will then be more likely to use finger counting and rote memorization for work with addition and subtraction.

Counting forward builds to the concept of addition while counting back leads to the concept of subtraction. However, counting is an inefficient strategy. Teachers need to provide instructional experiences so that students' progress from the concrete level, to the pictorial level, then to the abstract level when learning mathematical concepts.

Vocabulary

- Add
- Subtract
- Zero 0
- One 1
- Two 2
- Three 3
- Four 4
- Five 5
- Decompose

Essential Question(s)

How do I add and subtract within 5?

Essential Skill

I can QUICKLY and EASILY add and subtract any of the numbers from 0 to 5.

Example	Question
"I can add and subtract within 5 quickly without external help or counting in my head."	Add 2 + 3 without counters.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Have students decompose numbers less than or equal to 5 during a variety of experiences to promote their fluency with sums and differences less than or equal to 5 that result from using the numbers 0 to 5. For example, ask students to use different models to decompose 5 and record their work with drawings or equations. Next, have students decompose 6, 7, 8, 9, and 10 in a similar fashion. As they come to understand the role and meaning of arithmetic operations in number systems, students gain computational fluency, using efficient and accurate methods for computing.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.OA.5 (Future Grade Standard)
N/A	Relate counting to addition and subtraction, e.g., by counting on 2 to add 2.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.NBT.1

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, drawing 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.

Common Misconceptions

Students have difficulty with ten as a singular word that means 10 things. For many students, the understanding that a group of 10 things can be replaced by a single object and they both represent 10 is confusing.

Help students develop the sense of 10 by first using groupable materials then replacing the group with an object or representing 10.

Watch for and address the issue of attaching words to materials and groups without knowing what they represent. If this misconception is not addressed early on it can cause additional issues when working with numbers 11-19 and beyond.

Vocabulary

- Ten 10
- Eleven 11
- Twelve 12
- Thirteen 13
- Fourteen 14
- Fifteen 15
- Sixteen 16
- Seventeen 17
- Eighteen 18
- Nineteen 19
- Compose
- Decompose
- Equation
- Ones
- Tens
- Record
- Tell
- Show

Essential Question(s)

How can I show a number (11-19)?

What does a two-digit number (11-19) mean?

Essential Skill

I know that the numbers 11-19 represents a quantity.
I understand that numbers 11-19 are composed of 10 ones and one, two, three, four, five, six, seven, eight, or nine ones.
I can represent compositions or decompositions of 11-19 by a drawing or equation.
I can compose numbers 11-19 into 10 ones and some further ones using objects and drawings.
I can decompose numbers 11-19 into 10 ones and some further ones using objects and drawings.

Example	Question
"I know that 14 is a ten and four more. I can also show that with a stick and 4 additional blocks."	How can you make 17? Can you show that with base-ten blocks? ten

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Kindergarteners need to understand the idea of a ten so they can develop the strategy of adding onto 10 to add within 20 in Grade 1. Students need to construct their own base-ten ideas about quantities and their symbols by connecting to counting by ones. They should use a variety of manipulatives to model and connect equivalent representations for the numbers 11 to19. For instance, to represent 13, students can count by ones and show 13 beans. They can anchor to five and show one group of 5 beans and 8 beans or anchor to ten and show one group of 10 beans and 3 beans. Students need to eventually see a ten as different from 10 ones.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.NBT.2 (Future Grade Standard)
N/A	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten." b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 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).

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.

Common Misconceptions

Discourage the use of the words bigger and smaller and ask the students to use words appropriate to the attributes they are measuring. For length, objects are shorter and longer and for weight heavier and lighter.

Vocabulary

- Height
- Length
- Weight
- Shorter
- Longer
- Heavier
- Describe
- Compare
- Explain

Essential Question(s)

What do I know about this object?

What do I know about the size of this object?

Essential Skill

I know that objects have measurable attributes and know what they are called, such as length and weight.

I can describe an object using multiple attributes such as: width, height, length, weight, etc.

I can describe more than one measurable attribute of a single object.

Example	**Question**
"I could describe how long a book is or how wide it is. I could also talk about how heavy it is."	Pick one block to describe for students so that students understand the task. Choose a cube to describe. (e.g. "All of the sides are the same length.") Ask student to choose a different block and describe it. (e.g. They might say, "This block has 2 long sides and 2 shorter sides.") Can the student describe more than one attribute? Does the student only describe the length? Do they consider width or weight? (e.g. "It is heavier than the cube." or " If you line up 2 of these blocks, they are the same length as that block."

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Provide categories for students to use to sort a collection of objects. Each category can relate to only one attribute, like Red and Not Red or Hexagon and Not Hexagon, and contain up to 10 objects. Students count how many objects are in each category and then order the categories by the number of objects they contain.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.MD.1 (Future Grade Standard)
N/A	Order three objects by length; compare the lengths of two objects indirectly by using a third object.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.*	**Common Misconceptions** Discourage the use of the words bigger and smaller and ask the students to use words appropriate to the attributes they are measuring. For length, objects are shorter and longer and for weight heavier and lighter.	**Vocabulary** - Capacity - Holds Less - Holds More - Longer - Shorter - Heavier - Lighter - Taller - More of - Less of - Describe - Compare

K MD 2

Essential Understanding(s)

How are these two objects alike and different?

Essential Skills	I know the meaning of a variety of attributes. I know that two objects can be compared using a particular attribute. I can compare two objects and determine which has more or less of a measureable attribute to describe the difference.

Example	**Question**
I know when comparing two books that one might be longer or wider and also it could be heavier."	2. Circle the object that is lighter.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Connect to other subject areas. For example, suppose that the students have been collecting rocks for classroom observation and they wanted to know if they have collected typical or unusual rocks. Ask students to discuss the measurable attributes of rocks. Lead them to first comparing the weights of the rocks. Have the class chose a rock that seems to be a "typical" rock. Provide the categories: Lighter Than Our Typical Rock and Heavier Than Our Typical Rock. Students can take turns holding a different rock from the collection and directly comparing its weight to the weight of the typical rock and placing it in the appropriate category. Some rocks will be left over because they have about the same weight as the typical rock. As a class, they count the number of rocks in each category and use these counts to order the categories and discuss whether they collected "typical" rocks.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	**1.MD.2 (Future Grade Standard)**
N/A	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.*

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.	**Common Misconceptions**	**Vocabulary** ▪ Alike ▪ Different ▪ Shape ▪ Size ▪ Sort ▪ Count ▪ Classify ▪ Category/Categorize

Essential Question(s)

What groups can I make with these objects?

Why did I group objects together?

How many objects are in the group?

Essential Skills

I can recognize non-measurable attributes such as shape or color.

I can recognize measurable attributes such as length, weight, height.

I know what classify and sort means.

I know that a category is the group that an object belongs to according to a particular, selected attribute.

I understand one-to-one correspondence with ten or less objects.

I can classify objects into categories by particular attributes.

I can sort objects into categories then determine the order by number of objects in each category (limit category counts to be less than or equal to ten).

Examples	Questions
"Given some shapes I can sort them into groups by color or shape."	Show the student the collection of cubes. Say: *I have a set of cubes. Sort these cubes by color.*

After the student has sorted the cubes by color, say: *Count the number of cubes in each group. How many cubes do you have in each group? Do you have any groups that have the same amount?"* Prompt if needed: *"Which groups have the same amount?"* |

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Provide categories for students to use to sort a collection of objects. Each category can relate to only one attribute, like Red and Not Red or Hexagon and Not Hexagon, and contain up to 10 objects. Students count how many objects are in each category and then order the categories by the number of objects they contain.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.MD.4 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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*.

Common Misconceptions

Students many times use incorrect terminology when describing shapes. For example, students may say a cube is a square or that a sphere is a circle. The use of the two-dimensional shape that appears to be part of a three-dimensional shape to name the three-dimensional shape is a common misconception. Work with students to help them understand that the two-dimensional shape is a part of the object but it has a different name.

Vocabulary

- Above
- Below
- In Front Of
- Behind
- Beside
- Next To
- Square
- Circle
- Triangle
- Rectangle
- Hexagon
- Cube
- Cone
- Cylinder
- Sphere

- Describe
- Find
- Identify
- Location

Essential Question(s)

How can I describe a shape?

Where is the shape?

Essential Skills

I can describe objects in the environment using shape words.

I can describe positions such as above, below, beside, in front of, behind, and next to.

I can determine the relative position of 2- or 3-dimensional shapes within the environment, using the appropriate positional words to describe them.

Examples	**Questions**
"I can find many 'triangles' in my classroom."	Point to a rectangle in the classroom.
"I can tell my friends there is a square above their head on the ceiling."	Place an x under the ball.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Develop spatial sense by connecting geometric shapes to students' everyday lives. Initiate natural conversations about shapes in the environment. Have students identify and name two- and three-dimensional shapes in and outside of the classroom and describe their relative position.

Career Connection
Provide students with real-work examples that demonstrate the use of shapes in various work places (e.g., circle wheels on a car, rectangle door on a house, triangle suspensions on a bridge). Students will identify the shapes within the context. Then, lead a discussion of careers related to the examples (e.g., architects, designers, engineers).

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	**1.G.1 (Future Grade Standard)**
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.G.2

Correctly name shapes regardless of their orientations or overall size.

Essential Question(s)

What is a shape called?

Why do shapes have the same name, but look different?

Common Misconceptions

Students many times use incorrect terminology when describing shapes. For example, students may say a cube is a square or that a sphere is a circle. The use of the two-dimensional shape that appears to be part of a three-dimensional shape to name the three-dimensional shape is a common misconception. Work with students to help them understand that the two-dimensional shape is a part of the object but it has a different name.

Vocabulary

- Circle
- Rectangle
- Hexagon
- Triangle
- Square
- Cube
- Cone
- Cylinder
- Sphere
- Straight
- Round
- Side
- Vertex
- Two-dimensional
- Three-dimensional
- Shapes
- Solids
- Name
- Identify
- Describe

Essential Skills

I can recognize that size does not affect the name of the shape.

I can recognize that orientation does not affect the name of the shape.

I can name shapes, regardless of orientation or size.

Examples	Question
	Show the student a triangle. Ask: *What is the name of this shape? How do you know that this is a triangle?* Rotate the shape and repeat the questions.
"I know a cylinder no matter how you turn it or color it."	Show the student a cube. Ask: *What is the name of this solid? How do you know that this is a cube?* Show them a different size cube and repeat the questions.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Use a shape in different orientations and sizes along with non-examples of the shape so students can learn to focus on defining attributes of the shape.

Career Connection
Provide students with real-work examples that demonstrate the use of shapes in various work places (e.g., circle wheels on a car, rectangle door on a house, triangle suspensions on a bridge). Students will identify the shapes within the context. Then, lead a discussion of careers related to the examples (e.g., architects, designers, engineers).

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(Prior Grade Standard)	1.G.1 (Future Grade Standard)
N/A	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.

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.G.3

Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Essential Question(s)

How do I know this object is two- or three-dimensional?

Common Misconceptions

Students many times use incorrect terminology when describing shapes. For example, students may say a cube is a square or that a sphere is a circle. The use of the two-dimensional shape that appears to be part of a three-dimensional shape to name the three-dimensional shape is a common misconception. Work with students to help them understand that the two-dimensional shape is a part of the object but it has a different name.

Vocabulary

- Circle
- Rectangle
- Hexagon
- Triangle
- Square
- Cube
- Cylinder
- Cone
- Sphere
- Two-dimensional
- Three-dimensional
- Shapes
- Solids
- Identify
- Name
- Label

Essential Skills

I can define the difference between two- and three-dimensional shapes.

I can determine if an object is two-or three-dimensional.

Examples	Questions
"I can name triangles, squares, circles, rectangles, and hexagons." "I can name cubes, cones, cylinders, and spheres."	Show a collection of two-dimensional and three-dimensional shapes. Ask students to sort the objects into the categories "Two-Dimensional" or "Three-Dimensional."

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Use a shape in different orientations and sizes along with non-examples of the shape so students can learn to focus on defining attributes of the shape.

Career Connection
Manipulatives used for shape identification actually have three dimensions. However, Kindergartners need to think of these shapes as two- dimensional or "flat" and typical three-dimensional shapes as "solid." Students will identify two-dimensional shapes that form surfaces on three- dimensional objects. Students need to focus on noticing two and three dimensions, not on the words two-dimensional and three-dimensional.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.G.2 (Future Grade Standard)
N/A	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. (Note: Students do not need to learn formal names such as "right rectangular prism.")

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

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.

Common Misconceptions

One of the most common misconceptions in geometry is the belief that orientation is tied to shape. A student may see the first of the figures below as a triangle, but claim to not know the name of the second.

Students need to have many experiences with shapes in different orientations.

Another misconception is confusing the name of a two-dimensional shape with a related three-dimensional shape or the shape of its face. For example, students might call a cube a square because the student sees the face of the cube.

Vocabulary

- Circle
- Rectangle
- Hexagon
- Triangle
- Square
- Cube
- Cylinder
- Cone
- Sphere
- Roll
- Stack
- Slide
- Vertices
- Side
- Base
- Two-dimensional
- Three-dimensional
- Compare
- Analyze
- Describe

Essential Question(s)

How can I describe a shape?

How are these shapes the same or different?

Why are these shapes the same or different?

Essential Skills

I can identify attributes of shapes.

I can describe attributes of a variety of two- and three-dimensional shapes.

I can analyze and compare two- and three-dimensional shapes, in different sizes and orientations, describing their similarities, differences, and other attributes.

Examples	Questions
When I compare a square and a triangle, I notice the number of 2-D shapes and the number of sides.	Have each child select two 2-D shapes and share with the group one way the two shapes are alike and one way they are different.
When I compare a cylinder and a cone, I notice they both have round bases but the cylinder has two of them.	Have each child select two 3-D shapes and share with the group one way the two shapes are alike and one way they are different.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Use shapes collected from students to begin the investigation into basic properties and characteristics of two- and three-dimensional shapes. Have students analyze and compare each shape with other objects in the classroom and describe the similarities and differences between the shapes. Ask students to describe the shapes while the teacher records key descriptive words in common student language. Students need to use the word flat to describe two-dimensional shapes and the word solid to describe three-dimensional shapes.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.G.2 (Future Grade Standard)
N/A	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. (Note: Students do not need to learn formal names such as "right rectangular prism.")

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.G.5	Model shapes in the world by building shapes from components, e.g., sticks and clay balls, and drawing shapes.	**Common Misconceptions**	**Vocabulary**

Common Misconceptions

Students do not understand that two-dimensional shapes are "flat" and three-dimensional shapes are "solid".

Vocabulary

- Round
- Rectangle
- Side
- Square
- Straight
- Triangle
- Analyze
- Compare
- Create
- Compose

Essential Question(s)

How can I show what a shape looks like?

Essential Skills

I can recognize and identify basic shapes in the real world.

I can draw shapes found in the environment.

I can construct shapes from components (e.g., sticks and clay balls).

Examples	Questions
"When my teacher gives me toothpicks and gumdrops, I can build a cube."	Draw a cylinder.
"When my teacher gives me toothpicks I can make a triangle."	Draw a rectangle.

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

The teacher and students orally describe and name the shapes found on a Shape Hunt. Students draw a shape and build it using materials regularly kept in the classroom such as construction paper, clay, wooden sticks or straws.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.G.2 (Future Grade Standard)
N/A	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. (Note: Students do not need to learn formal names such as "right rectangular prism.")

Ohio's Learning Standards-Clear Learning Targets
Math, Kindergarten

K.G.6

Combine simple shapes to form larger shapes.

Essential Understanding(s)

How do smaller shapes make a bigger shape?

Why did these smaller shapes make this bigger shape?

Common Misconceptions

A misconception is confusing the name of a two-dimensional shape with a related three-dimensional shape or the shape of its face. For example, students might call a cube a square because the student sees the face of the cube.

Vocabulary

- Round
- Rectangle
- Side
- Square
- Straight
- Triangle
- Order
- Vertex
- Analyze
- Compare
- Create
- Compose
- Combine

Essential Skills

I can analyze how to put simple shapes together to compose a new or larger shape.

I can compose a new or larger shape using more than one simple shape.

Examples	Question
When I put two squares together side by side, it looks just like a square.	Give the student 2 rectangles. Say: Join these two rectangles to make a square. When the student is finished, ask: How do you know that this new shape is a square?

Ohio Department of Education Model Curriculum Instructional Strategies and Resources

Have students compose (build) a larger shape using only smaller shapes that have the same size and shape. The sides of the smaller shapes should touch and there should be no gaps or overlaps within the larger shape. For example, use one-inch squares to build a larger square with no gaps or overlaps. Have students also use different shapes to form a larger shape where the sides of the smaller shapes are touching and there are no gaps or overlaps. Ask students to describe the larger shape and the shapes that formed it.

http://education.ohio.gov/getattachment/Topics/Ohio-s-New-Learning-Standards/Mathematics/Kindergarten_Math_Model_Curriculum_March2015.pdf.aspx

(Prior Grade Standard)	1.G.2 (Future Grade Standard)
N/A	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. (Note: Students do not need to learn formal names such as "right rectangular prism.")