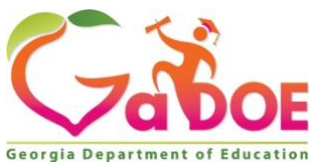


Georgia Kindergarten Inventory of Developing Skills (GKIDS 2.0)

Administration Manual
Part 3: Mathematics



July 2021



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Universal allowances, shown in the table below, may be used as necessary for all students and with all performance tasks. **These supports are aligned to best practices and provide flexibility to meet the diverse needs of a wide range of students.**

Universal Allowances

Presentation	<ul style="list-style-type: none"> • Read directions aloud and repeat as many times as needed, either by request of the student or as determined by the teacher. • Rephrase directions and/or questions, if needed. Rephrasing may include providing answer options or allowing for a yes/no response. • Provide audio amplification for verbal directions and tasks as needed. • Redirect student’s attention to a task or a direction as needed. • Provide magnification or enlargement of assessment tasks and/or manipulatives as needed. • Use familiar classroom materials to meet student’s needs. Materials can be adapted to meet the needs of the individual learner. • Provide physical support to improve visual acuity. For example, use color contrast overlay, slant board, textures, etc. • Change position or orientation of assessment materials to maximize student’s visual engagement or access to manipulatives.
Response	<ul style="list-style-type: none"> • Allow student to respond using his/her preferred mode of communication. • Modes of communication may include speech, eye gaze, pointing/gesturing/orienting to/touching answer choice, sign language, and/or use of augmentative communication systems. • Encourage student response without providing additional cues.
Setting	<ul style="list-style-type: none"> • Assess students in naturally occurring classroom contexts such as during center time, outdoor activities, teacher-directed instruction, and small group activities. • Allow the student to move and change positions during the session. • Consider the arrangement of the furniture, including allowing the student to stand or use alternative seating during a direct assessment activity. • Provide tasks in areas conducive to the student's physical and sensory needs, including one-on-one assessment in a quiet space when necessary.

Scheduling	<ul style="list-style-type: none"> • Use teacher discretion for starting and stopping a task based on the readiness of the student. • Teachers may administer performance tasks based on student readiness, professional judgement, and/or alignment to local district content pacing guides or curriculum patterns.
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For students who need additional support, comprehensive support may be provided. Comprehensive supports provide access to a performance task but may substantially alter what the student is expected to do. If utilizing comprehensive supports, care should be taken when interpreting the student’s progress within the learning progression.

The comprehensive supports provided in the table below are intended as *examples* of how teachers might provide comprehensive support to students. Note that examples are not provided for all tasks. Teachers may use their professional judgment to determine the type of support that best meets the needs of each individual student.

Comprehensive Support Examples

Learning Target	Comprehensive Support Example	Materials Needed
SHA – 2	The teacher may reduce the number of 3-dimensional shapes presented to the student at one time (i.e., present two shapes at a time instead of all four), then ask the student to point to a specific shape.	3-dimensional shapes: sphere, cylinder, cube, and cone
SHA – 5	The teacher can provide the student with only enough attribute blocks to complete the larger shape.	Attribute blocks and composite shape templates
RC Activity 2	The teacher can point to each object being counted while the student assigns (counts) a single number with each object the teacher touches.	

COB – 1	<p>Part A, Part D, and Part E: The teacher can point to each object being counted while the student assigns (counts) a single number with each object the teacher touches.</p> <p>Part B: The teacher can present fewer numerals from which the student can choose to show the number of objects in the set.</p> <p>Part F: The student can use a number line to identify the number of objects if one more were added to the set.</p>	
COB – 2	<p>Part A, Part D, and Part E: The teacher can point to each object being counted while the student assigns (counts) a single number with each object the teacher touches.</p> <p>Part B: The teacher can present fewer numerals from which the student can choose to show the number of objects in the set.</p>	
COB – 3	<p>Part A and Part C: The teacher can point to each object being counted while the student assigns (counts) a single number with each object the teacher touches.</p> <p>Part B: The teacher can present fewer numerals from which the student can choose to show the number of objects in the set.</p>	One set of written numerals 1-10 with graphic support
COMP – 1	The teacher can present sets in the arrangement which clearly show the comparison between the sets.	
COMP – 2	Part B: The teacher can present sets in the arrangement which clearly show the comparison between the sets.	
COMP – 3	Part A: The teacher can use number cards with graphic support (e.g., circles representing the numeral presented).	Written numerals 1-5 with graphic support
ADSU – 1	The teacher can provide the sets of objects needed to solve the problem. The student can manipulate the sets as needed, then count to solve the problem.	

LEARNING PROGRESSION: SHAPES

Big Idea: A kindergarten student will model real-world problems by composing 2- and 3- dimensional shapes.				
Progression: Shapes				
Beginning	Emerging	Developing	Demonstrating	Exceeding
<p><u>GKIDS Readiness Check Mathematics Activity 5</u> Identifies (points to) 2-dimensional shapes; square, triangle, circle, and rectangle (e.g., point to the circle).</p>	<p><u>SHA-1 (Part A)</u> Names 2-dimensional shapes: square, triangle, circle, rectangle, and hexagon.</p>	<p><u>SHA-2 (Part A)</u> Names 3-dimensional shapes: sphere, cylinder, cube, and cone.</p>	<p><u>SHA-4</u> Explains similarities and differences among 2- and 3- dimensional shapes using attributes when classifying, sorting, or identifying.</p>	<p><u>SHA-7</u> Builds or draws 2- and 3- dimensional shapes from given defining attributes (e.g., draw a shape with 4 corners and 4 sides and all sides are the same length).</p>
	<p><u>SHA-1 (Part B)</u> Identifies (points to) sides and corners (vertices) when asked.</p>	<p><u>SHA-3 (Part A)</u> Classifies, sorts, or identifies shapes as 2- or 3- dimensional.</p>	<p><u>SHA-5</u> Composes simple shapes to form larger shapes with given attributes.</p>	<p><u>SHA-8</u> Uses composite shapes to create additional composite shapes (e.g., adds on to a given or self-created composite shape).</p>
	<p><u>SHA-2 (Part B)</u> Identifies (points to) 3-dimensional shapes: sphere, cylinder, cube, and cone.</p>	<p><u>SHA-3 (Part B)</u> Describes 2-dimensional shapes using their attributes.</p>	<p><u>SHA-6</u> Creates models of real-world figures by composing 2- and 3- dimensional shapes.</p>	<p><u>SHA-9</u> Decomposes rectangles and circles into two and four equal shares by drawing partitions within a given shape.</p>
		<p><u>SHA-3 (Part C)</u> Describes 3-dimensional shapes using their attributes.</p>		

<p>CD-MA6.4a MGSEK.G.2</p>	<p>MGSEK.G.2 MGSEK.G.3 MGSEK.G.4</p>	<p>MGSEK.G.2 MGSEK.G.3 MGSEK.G.4 MGSEK.MD.3</p>	<p>MGSEK.G.4 MGSEK.G.5 MGSEK.G.6 MGSEK.MD.3</p>	<p>MGSEK.G.4 MGSEK.G.5 MGSEK.G.6 MGSE1.G.1 MGSE1.G.2 MGSE1.G.3</p>
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MATERIALS

Progression: Shapes	
Task ID	Materials
GKIDS Readiness Check Mathematics Activity 5	<ul style="list-style-type: none"> – 2-dimensional shapes: square, triangle, circle, and rectangle, (e.g., attribute blocks)
SHA-1	<ul style="list-style-type: none"> – 2-dimensional shapes: square, triangle, circle, rectangle, and hexagon (e.g., attribute blocks)
SHA-2	<ul style="list-style-type: none"> – 3-dimensional shapes: sphere, cylinder, cube, and cone (e.g., geometric shapes)
SHA-3	<ul style="list-style-type: none"> – 2-dimensional shapes: square, triangle, circle, rectangle, hexagon (e.g., attribute blocks) – 3-dimensional shapes: sphere, cylinder, cube, cone (e.g., geometric shapes) – Graphic organizer for sorting (e.g., T-chart)
SHA-4	<ul style="list-style-type: none"> – 2-dimensional shapes: square, triangle, circle, rectangle, hexagon (e.g., attribute blocks) – 3-dimensional shapes: sphere, cylinder, cube, cone (e.g., geometric shapes) – Graphic organizer to identify similarities and differences (e.g. Venn diagram)
SHA-5	<ul style="list-style-type: none"> – A reasonable number of shapes such as attribute blocks or real-world objects available in the classroom (e.g., squares, triangles, circles, rectangles, hexagons) depending on the number of shapes needed to fill the templates. – Composite shape templates consisting of an outline of a larger shape that can be made by composing the smaller shape manipulatives that are provided. Templates could include but are not limited to: square (composed of smaller squares), square (composed of rectangles), square (composed of triangles), rectangle (composed of squares), rectangle (composed of triangles), triangle (composed of smaller triangles), or rhombus (composed of triangles).

SHA-6	<ul style="list-style-type: none"> – Classroom container of shapes such as attribute blocks (e.g., squares, triangles, circles, rectangles, hexagons) – Materials for students to create models (e.g., paper for drawings, sticks, toothpicks, modeling clay, play dough, geoboards) – Real-world figures, or pictures of real-world figures (e.g., soda can, toy car, baseball, people, animals)
SHA-7	<ul style="list-style-type: none"> – Materials for students to create models (e.g., paper for drawings, sticks, toothpicks, modeling clay, play dough, geoboards)
SHA-8	<ul style="list-style-type: none"> – A reasonable number of shapes such as attribute blocks (e.g., squares, triangles, circles, rectangles, hexagons).
SHA-9	<ul style="list-style-type: none"> – Printed or shape cut-outs of rectangles and circles – Writing tool

GKIDS Readiness Check Mathematics Activity 5

Learning Target(s): <i>Beginning</i>	– Identifies (points to) 2-dimensional shapes; square, triangle, circle, and rectangle (e.g., point to the circle). (CD-MA6.4a, MGSEK.G.2)
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GKIDS is designed to provide teachers with a better understanding of where students are in their learning and development throughout the year. At the beginning of the year, teachers give the GKIDS Readiness Check to elicit evidence to show where a kindergarten student is when he or she enters kindergarten. The baseline data collected in the first six weeks on the GKIDS Readiness Check can serve as the entry point to skills described in the GKIDS 2.0 learning progression.

The following performance task is an activity from the GKIDS Readiness Check. For this progression, Mathematics Activity 5 from the GKIDS Readiness Check can be used to assess the *Beginning* stage of the progression.

If the student was rated as *Demonstrating* on Mathematics Activity 5, he or she can be matched to the *Beginning* stage of the progression.

If the student was rated below *Demonstrating* on Mathematics Activity 5, the teacher should continue instruction on recognizing and naming shapes and reassess the student when appropriate.

GKIDS Readiness Check Mathematics Activity 5

Recognizes and names common two-dimensional shapes.

Activity	Performance Levels	
<p>Student will identify and name four basic shapes (circle, square, rectangle, and triangle).</p> <p>The teacher will need attribute blocks or paper cut-outs, for example, of the four basic shapes.</p> <p>Hold up each shape one at a time and say, “What is the name of this shape?” The teacher will repeat this question for each shape, unless the student offers the name of the shape as the teacher presents it.</p> <p>Note: If the student correctly names all four shapes, it is not necessary to complete the second part of this activity. Rate the student as Demonstrating and conclude the activity.</p> <p>If the student cannot name all four shapes, mix up the order of the shapes, and ask the student to recognize and identify each shape. Place all of the shapes side-by-side in front of the student and ask, “Point to the circle. Point to the square. Point to the triangle. Point to the rectangle.”</p>	Not Yet Demonstrated	The student does not recognize or correctly name any of the shapes.
	Emerging	The student recognizes or names one to three shapes.
	Developing	The student recognizes all four shapes and names one to three shapes.

<p><u>Materials:</u> Teachers may either use their own classroom materials (e.g., manipulatives such as attribute blocks) or the provided optional worksheet with common 2-D shapes.</p>	<p>Demonstrating</p>	<p>The student recognizes and names all four shapes.</p>
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SHA-1

Learning Target(s): <i>Emerging</i>	<ul style="list-style-type: none">– Names 2 -dimensional shapes: square, triangle, circle, rectangle, and hexagon. (MGSEK.G.2)– Identifies (points to) sides and corners (vertices) when asked. (MGSEK.G.4)
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GKIDS Readiness Check Note:

Student names 2-dimensional shapes on the GKIDS Readiness Check Mathematics Activity 5. If the student recognized and named all four shapes (circle, square, triangle, rectangle), rated as *Demonstrating*, then the student only needs to name a hexagon in Part A of this task.

Manipulatives or Materials:

- 2-dimensional shapes: square, triangle, circle, rectangle, and hexagon (e.g., attribute blocks)

Performance Task Activity:

Part A:

Place 2-dimensional shapes: square, triangle, circle, rectangle, and hexagon on the table in front of the student (or only hexagon, if the student rated as *Demonstrating* on the GKIDS Readiness Check, Mathematics Activity 5).

Hold up each shape one at a time and ask the student to name the shape, “**What is the name of this shape?**” Allow the student to respond orally.

Part B:

Place an attribute block in front of the student.

Ask the student to identify the sides of the shape. Say, “**Point to this shape’s sides.**” Then, ask the student to identify the corners of the shape. Say, “**Point to this shape’s corners.**”

Repeat with at least one other 2-dimensional shapes such as a triangle, rectangle, and hexagon.

If the student correctly names all 2-dimensional shapes in Part A and identifies sides and corners with at least 80% accuracy in Part B, the student is partially matched to the *Emerging* stage of the progression.

SHA-2

Learning Target(s): <i>Emerging Developing</i>	<ul style="list-style-type: none">– Names 3 dimensional shapes; sphere, cylinder, cube, and cone. (MGSEK.G.3)– Identifies (points to) 3 dimensional shapes; sphere, cylinder, cube, and cone. (MGSEK.G.2)
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Manipulatives or Materials:

- 3-dimensional shapes: sphere, cylinder, cube, and cone (e.g., geometric shapes)

Process Clarification:

In Part A, ask students to name 3-dimensional shapes: sphere, cylinder, cube, and cone. If students can name the shapes, then it is assumed they can also correctly identify the shapes. If the student is not successful in naming the shapes, then ask the student to identify the shapes in Part B.

Part A:

Place 3-dimensional shapes: sphere, cylinder, cube, and cone on the table in front of the student.

Hold up each shape one at a time and ask the student to name the shape, “**What is the name of this shape?**” Allow the student to respond orally.

Part B: (administered only if student does not correctly name all shapes in Part A)

Place 3-dimensional shapes: sphere, cylinder, cube, and cone on the table in front of the student.

Performance Task Activity:

Ask the student to identify the different shapes by pointing to them. Say, “**Point to the cube.**” Repeat the process by asking the student to point to a cylinder, cone, and sphere.

If the student correctly names all 3-dimensional shapes in Part A, the student is partially matched to the *Developing* stage of the progression. In addition, successful completion of Part A also satisfies the final learning target assessed in the *Emerging* stage of the progression.

If the student does not correctly name all 3-dimensional shapes in Part A, but correctly identifies all 3-dimensional shapes in Part B, the student is partially matched to the *Emerging* stage of the progression.

SHA-3

Learning Target(s): <i>Developing</i>	<ul style="list-style-type: none">– Classifies, sorts, or identifies shapes as 2- or 3- dimensional. (MGSEK.G.3, MGSEK.MD.3)– Describes 2- dimensional shapes using their attributes. (MGSEK.G.4)– Describes 3- dimensional shapes using their attributes. (MGSEK.G.4)
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Manipulatives or Materials:

- 2-dimensional shapes: square, triangle, circle, rectangle, hexagon (e.g., attribute blocks)
- 3-dimensional shapes: sphere, cylinder, cube, cone (e.g., geometric shapes)
- Graphic organizer for sorting (e.g. T-chart)

Note: Refer to the *Optional Resource Guide* for optional graphic organizers for student use.

Process Clarification:

In Parts B and C, students should focus on describing the defining attributes of shapes, moving beyond what shapes “look like” to identifying particular geometric attributes that define a shape. For 2-dimensional shapes, attributes include number of sides, number of corners, flat, etc. For 3-dimensional shapes, attributes include number of edges, number of corners, solid, shape of faces, and number of faces.

Performance Task Activity:

Part A:

Place the 2- and 3-dimensional shapes on the table in front of the student. The shapes should be in a mixed group where there is not a definitive group of 2-dimensional and 3-dimensional shapes. Ask the student to sort the shapes as either 2- or 3-dimensional. Say, “**Sort these shapes into two groups: flat shapes and solid shapes.**” Allow the student to move the shapes and observe as the student forms two groups.

Part B:

Place a 2-dimensional shape in front of the student. Ask the student to describe the attributes of the shape. Say, “**Describe this shape.**” Allow the student to respond orally. If the student only offers one attribute, prompt them to share more than one attribute of the shape. Say, “**Can you tell me more about this shape?**” Repeat with all the other 2-dimensional shapes.

Part C:

Place a 3-dimensional shape in front of the student. Ask the student to describe the attributes of the shape. Say, “**Describe this shape.**” Allow the student to respond orally. If the student only offers one attribute, prompt them to share more than one attribute of the shape. Say, “**Can you tell me more about this shape?**” Repeat with all the other 3-dimensional shapes.

If the student correctly sorts all 2- and 3-dimensional shapes in Part A and describes two or more attributes of each shape in Parts B and C, the student is partially matched to the *Developing* stage of the progression.

SHA-4

Learning Target(s): <i>Demonstrating</i>	– Explains similarities and differences among 2- and 3-dimensional shapes using attributes when classifying, sorting, or identifying. (MGSEK.G.4, MGSEK.MD.3)
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Manipulatives or Materials:

- 2-dimensional shapes: square, triangle, circle, rectangle, hexagon (e.g., attribute blocks)
- 3-dimensional shapes: sphere, cylinder, cube, cone (e.g., geometric shapes)
- Graphic Organizer to identify similarities and differences (e.g. Venn diagram)

Note: Refer to the *Optional Resource Guide* for optional graphic organizers for student use.

Process Clarification:

Students should focus on explaining similarities and differences among 2- and 3-dimensional shapes using defining attributes of two and three dimensions (e.g., number of sides for 2-dimensional shapes or number of faces for 3-dimensional shapes, respectively). The student should not focus on the words *two-dimensional* and *three-dimensional*. The similarities and differences should focus on defining attributes, not general attributes like color and size. Allow the student to manipulate or move the shapes to classify, sort, and identify how they are the same or different. If the student sorts, observe as the student forms groupings.

It is natural for students to initially talk about the faces as “sides” but as you talk about them use the word face, not side. Gradually, students will pick up on this and will start calling the “sides” faces.

Performance Task Activity:

In Parts A and B, students explain the similarities and differences among 2-dimensional and 3-dimensional shapes, respectively.

Part A:

Place a group of 2-dimensional shapes in front of the student. The shapes should be a mixed group where there is not a definitive group presented to the student (for example, square, triangle, and circle). Say, “**Look at these shapes. How are they the same?**” Allow the student to explain how the shapes are similar using defining attributes. Then, ask “**How**

are they different?” Allow the student to explain how the shapes are different using defining attributes.

The student explains at least one way in which the shapes in the group are the same. Similarities may include, but are not limited to:

- These shapes have sides (e.g., square, triangle).
- These shapes have four corners (e.g., rectangle, square).

The student explains at least one way in which the shapes in the group are different. Differences may include, but are not limited to:

- These shapes have corners (e.g., triangle, rectangle, hexagon). These shapes do not have corners (e.g., circle).
- These shapes have equal sides (e.g., square, hexagon). These shapes have different length sides (e.g., triangle, rectangle).
- These shapes have sides (e.g., square, triangle). These shapes do not have sides (e.g., circle).

Part B:

Place a group of 3-dimensional shapes in front of the student. The shapes should be a mixed group where there is not a definitive group presented to the student (for example, sphere, cylinder, cube, cone). Say, **“Look at these shapes. How are they the same?”** Allow the student to explain how the shapes are similar, using defining attributes. Then, ask **“How are they different?”** Allow the student to explain how the shapes are different, using defining attributes.

The student explains at least one way the shapes in the group are the same. Similarities may include, but are not limited to:

- These solid shapes have flat faces (e.g., cone, cube, cylinder).

The student explains at least one way the shapes in the group are different. Differences may include, but are not limited to:

- These solid shapes have faces (e.g., cone, cube, cylinder). These solid shapes do not (e.g., sphere).
- These solid shapes have square faces (e.g., cube). These solid shapes have circular faces (e.g., cone, cylinder).

If the student correctly explains at least one way the shapes in each group are the same and at least one way the shapes in each group are different, in both Part A and Part B, the student is partially matched to the *Demonstrating* stage of the progression.

SHA-5

Learning Target(s): <i>Demonstrating</i>	– Composes simple shapes to form larger shapes with given attributes. (MGSEK.G.6)
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Manipulatives or Materials:

- A reasonable number of shapes such as attribute blocks or real-world objects available in the classroom (e.g., squares, triangles, circles, rectangles, hexagons) depending on the number of shapes needed to fill the templates.
- Composite shape templates consisting of an outline of a larger shape that can be made by composing the smaller shape manipulatives that are provided. Templates could include but are not limited to: square (composed of smaller squares), square (composed of rectangles), square (composed of triangles), rectangle (composed of squares), rectangle (composed of triangles), triangle (composed of smaller triangles), or rhombus (composed of triangles).

Note: Refer to the *Optional Resource Guide* for example composite shape templates for student use.

Performance Task Activity:

Have attribute shapes available on the table for the student to access. Place a composite shape template with the outline of one shape in front of the student.

Ask the student to create the given shape using a particular attribute block. For example, say, **“Today, we’re going to put shapes together to make larger shapes. Here is a picture of a large square. Show me how you could use small squares to make this larger square.”** Or “Here is a picture of a rectangle. Show me how you could use triangles to make this rectangle.” Observe as the student joins attribute blocks to compose the larger shape. Repeat this process with at least one other composite shape template (e.g., rectangle, triangle, hexagon).

If the student correctly composes the larger shape for two or more composite shape templates, the student is partially matched to the *Demonstrating* stage of the progression.

SHA-6

Learning Target(s): <i>Demonstrating</i>	– Creates models of real-world figures by composing 2- and 3-dimensional shapes. (MGSEK.G.5)
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Manipulatives or Materials:

- Classroom container of shapes such as attribute blocks (e.g., squares, triangles, circles, rectangles, hexagons)
- Materials for students to create models (e.g., paper for drawings, sticks, toothpicks, modeling clay, play dough, geoboards)
- Real-world figures, or pictures of real-world figures (e.g., soda can, toy car, baseball, people, animals)

Process Clarification:

The student should be able to choose the real-world figures and materials he or she wants to use to create models.

Performance Task Activity:

Have a variety of materials available for the student. Have real-world figures, or pictures, for observation displayed prominently.

Explain the task to the student. Say, “**Today we will use flat and solid shapes to build models of things we see every day.**” Direct the student’s attention to the figures, or pictures, collected for his or her observation. Say, “**You may choose to build your model of one of the objects I have provided, or you may choose to model another object in the room.**” Direct the student’s attention to the collection of materials available for their modeling. “**You can use any of the materials here to build your model.**”

If the student correctly creates a model by composing 2- and 3-dimensional shapes, the student is partially matched to the *Demonstrating* stage of the progression.

SHA-7

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Builds or draws 2- and 3- dimensional shapes from given defining attributes (e.g., draw a shape with 4 corners and 4 sides and all sides are the same length). (MGSEK.G.4, MGSEK.G.5, MGSE1.G.1)
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Manipulatives or Materials:

- Materials for students to create models (e.g., paper for drawings, sticks, toothpicks, modeling clay, play dough, geoboards)

Process Clarification:

The student could create a variety of shapes for each prompt with the exception of the prompt for a square. Triangles could be right, isosceles, or scalene. The shape without corners could be an oval or circle. For the last prompt, any quadrilateral, other than a square, could be drawn.

Performance Task Activity:

Have modeling materials available for the student to use. Ask the student to create a shape with given attributes:

- **“Create a shape with four corners, four sides, where all the sides are the same length.”**
- **“Create a shape that has three sides and three corners.”**
- **“Create a shape that has no corners.”**
- **“Create a shape that has four corners, four sides, where the sides are not all the same length.”**

If the student correctly builds or draws 2- and 3-dimensional shapes with the given attributes with at least 80% accuracy, the student is partially matched to the *Exceeding* stage of the progression.

SHA-8

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Uses composite shapes to create additional composite shapes (e.g., adds on to a given or self-created composite shape). (MGSEK.G.6, MGSE1.G.2)
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Manipulatives or Materials:

- A reasonable number of shapes such as attribute blocks (e.g., squares, triangles, circles, rectangles, hexagons)

Performance Task Activity:

Have attribute shapes available on the table for the student to access.

Ask the student to create one of the shapes using a particular attribute block. For example, say, **“Today, we’re going to put shapes together to make new shapes. For example, two squares can be put together to make a rectangle.”** Demonstrate this for the student using the attribute blocks. Say, **“Show me the different shapes you can make by joining a triangle with a square.”** Allow the student to compose the first shape, observing as they utilize attribute blocks to compose their shape.

Then ask the student to add on to the composite shape. Say, **“Now, show me a different shape you can make by adding another triangle.”** Allow the student time to work and observe as they utilize attribute blocks to compose the larger shape. Repeat this process with other given composite shapes or allow the student to create his or her own composite shape.

If the student correctly uses composite shapes to create two or more additional composite shapes, the student is partially matched to the *Exceeding* stage of the progression.

SHA-9

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Decomposes rectangles and circles into two and four equal shares by drawing partitions within a given shape. (MGSE1.G.3)
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Manipulatives or Materials:

- Printed or shape cut-outs of rectangles and circles
- Writing tool

Note: Refer to the *Optional Resource Guide* for optional printed rectangles and circles for student use.

Process Clarification:

Circular partitions must go through the center of the circle to create true equivalence. Rectangular partitions into fourths could cross through the middle or be three equally spaced horizontal or vertical lines.

Performance Task Activity:

Give the student a pencil. Place a circle in front of the student and ask him or her to partition the circle into two equal parts. Say, **“Draw a line to show me how to divide this circle into two equal shares.”**

Place another circle in front of the student and ask him or her to partition the circle into four equal parts. Say, **“Draw lines to show me how to divide this circle into four equal shares.”**

Place a rectangle in front of the student and ask him or her to partition the rectangle into two equal parts. Say, **“Draw a line to show me how to divide this rectangle into two equal shares.”**

Place another rectangle in front of the student and ask him or her to partition the rectangle into four equal parts. Say, **“Draw lines to show me how to divide this rectangle into four equal shares.”**

If the student correctly partitions the circle and rectangle into two and four equal shares, the student is partially matched to the *Exceeding* stage of the progression.

LEARNING PROGRESSION: COUNTING - NUMBER

Big Idea: A kindergarten student will count using multiple strategies.				
Progression: Counting – Number (Note: Expectation is non-written communication in a form appropriate for the student, such as counting out loud or sign language).				
Beginning	Emerging	Developing	Demonstrating	Exceeding
GKIDS Readiness Check Mathematics Activity 1 Counts forward to 20.	CNUM-1 Counts forward to 30 by 1s.	CNUM-1 Counts forward to 50 by 1s.	CNUM-1 Counts forward to 100 by 1s.	CNUM-1 Counts forward to 120 by 1s.
		CNUM-2 Counts forward to 50 by 10s.	CNUM-2 Counts forward to 100 by 10s.	CNUM-2 Counts forward to 120 by 10s.
		CNUM-3 Counts forward to 30 from a given number within 0-30 (e.g., "starting with 15, count up to 30").	CNUM-4 Counts forward to 100 from a given number within 0 - 100.	CNUM-5 Counts forward to 120 by 5s.
CD-MA1.4a	MGSEK.CC.1	MGSEK.CC.1 MGSEK.CC.2	MGSEK.CC.1 MGSEK.CC.2	MGSE1.NBT.1

GKIDS Readiness Check Mathematics Activity 1

Learning Target(s): <i>Beginning</i>	– Counts forward to 20. (CD-MA1.4a)
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GKIDS is designed to provide teachers with a better understanding of where students are in their learning and development throughout the year. At the beginning of the year, teachers give the GKIDS Readiness Check to elicit evidence to show where a kindergarten student is when he or she enters kindergarten. The baseline data collected in the first six weeks on the GKIDS Readiness Check can serve as the entry point to skills described in the GKIDS 2.0 learning progression.

The following performance task is an activity from the GKIDS Readiness Check. For this progression, *Mathematics Activity 1* from the GKIDS Readiness Check can be used to assess the *Beginning* stage of the progression.

If the student was rated as *Demonstrating* on *Mathematics Activity 1*, he or she can be fully matched to the *Beginning* stage of the progression.

If the student was rated below *Demonstrating* on *Mathematics Activity 1*, the teacher should continue instruction on counting and reassess the student when appropriate.

Note: Although the target in the GKIDS Readiness Check focuses on counting to 20 in sequence, the instructions allow the student to recite numbers greater than 20. If the student counts higher than 20, the student can be matched to later stages of the learning progression depending on the highest number counted without error.

GKIDS Readiness Check Mathematics Activity 1

Recites numbers up to 20 in sequence.

Activity	Performance Levels	
<p>Student will verbally recite all numbers from one to twenty in sequence.</p> <p>Say, “Please count out loud for me.”</p> <p><u>Process Clarification:</u> Counting in sequence means reciting each number with no skipped numbers or incorrectly stated numbers. For example, if the student says ten, twelve, thirteen, score the student’s performance according to the academic performance level demonstrating the highest correct response (in this case the student would score emerging). The student may repeat a number, if halted, to restart the activity. For example, if the student says ten, eleven, twelve, then halts and says, twelve, thirteen, fourteen, the student should be given credit for stating the number correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers one through five and then stops, the student could restart counting from one through five and continue until either making a mistake or reaching twenty. Student might also use his or her fingers to count and that should be permitted.</p>	<p>Not Yet Demonstrated</p>	<p>The student does not make any attempt to recite numbers or says random numbers.</p>
	<p>Emerging</p>	<p>The student correctly recites numbers in sequence between one and ten but does not recite numbers beyond ten.</p>
	<p>Developing</p>	<p>The student correctly recites numbers in sequence from at least one to eleven but less than twenty.</p>

<p><u>Scoring Note:</u> Teachers may allow students to count beyond 20 as a means of collecting data for other purposes (e.g., GKIDS). For the GKIDS Readiness Check, rate student performance based on the descriptors included here.</p> <p>If the student correctly counts higher than 20, the student can be matched to later stages of the learning progression depending on the highest number counted without error.</p>	<p>Demonstrating</p>	<p>The student correctly recites all numbers from one to twenty.</p>
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CNUM-1

Learning Target(s): <i>Emerging</i> <i>Developing</i> <i>Demonstrating</i> <i>Exceeding</i>	<ul style="list-style-type: none">– Counts forward to 30 by 1s. (MGSEK.CC.1)– Counts forward to 50 by 1s. (MGSEK.CC.1)– Counts forward to 100 by 1s. (MGSEK.CC.1)– Counts forward to 120 by 1s. (MGSE1.NBT.1)
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Process Clarification:

Counting in sequence means reciting each number with no skipped numbers or incorrectly stated numbers. The student may self-correct, or repeat a number, if halted, to restart counting. For example, if the student says “ten, eleven, twelve”, then halts and says, “twelve, thirteen, fourteen”, the student should be given credit for reciting the numbers correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers one through five and then stops, the student could restart counting from one through five and continue. Student might also use his or her fingers to count.

Performance Task Activity:

Say, “**Please count out loud for me.**”

Allow the student to count as high as he or she can and record performance. Performance on this task can provide evidence of skills described in different stages of the progression.

If the student correctly counts forward to 30 by 1s, the student is fully matched to the *Emerging* stage of the progression.

If the student correctly counts forward to 50 by 1s, the student is partially matched to the *Developing* stage of the progression.

If the student correctly counts forward to 100 by 1s, the student is partially matched to the *Demonstrating* stage of the progression.

If the student correctly counts forward to 120 by 1s, the student is partially matched to the *Exceeding* stage of the progression.

CNUM-2

Learning Target(s): <i>Developing</i> <i>Demonstrating</i> <i>Exceeding</i>	<ul style="list-style-type: none">– Counts forward to 50 by 10s. (MGSEK.CC.1)– Counts forward to 100 by 10s. (MGSEK.CC.1)– Counts forward to 120 by 10s. (MGSE1.NBT.1)
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Process Clarification:

The student may self-correct, or repeat a number, if halted, to restart counting. For example, if the student says “ten, twenty, thirty”, then halts and says, “thirty, forty, fifty”, the student should be given credit for reciting the numbers correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers ten, twenty, thirty and then stops, the student could restart counting from ten and continue.

Performance Task Activity:

Say, “**Please count out loud by tens, starting with the number ten. Count as high as you can.**”

Allow the student to count as high as he or she can by tens and record performance. Performance on this task can provide evidence of skills described in different stages of the progression.

If the student correctly counts forward to 50 by 10s, the student is partially matched to the *Developing* stage of the progression.

If the student correctly counts forward to 100 by 10s, the student is partially matched to the *Demonstrating* stage of the progression.

If the student correctly counts forward to 120 by 10s, the student is partially matched to the *Exceeding* stage of the progression.

CNUM-3

Learning Target(s): <i>Developing</i>	– Counts forward to 30 from a given number within 0-30 (e.g., "starting with 15, count up to 30"). (MGSEK.CC.2)
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Process Clarification:

The student may self-correct, or repeat a number, if halted, to restart counting. For example, if the student says "eighteen, nineteen, twenty", then halts and says, "twenty, twenty-one, twenty-two", the student should be given credit for reciting the numbers correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers eighteen, nineteen, twenty and then stops, the student could restart counting from eighteen and continue.

Performance Task Activity:

Say, **"Please count out loud for me starting with the number 18."**

If the student correctly counts forward to 30 from the given number, the student is partially matched to the *Developing* stage of the progression.

CNUM-4

Learning Target(s): <i>Demonstrating</i>	– Counts forward to 100 from a given number within 0 - 100. (MGSEK.CC.2)
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Process Clarification:

The student may self-correct, or repeat a number, if halted, to restart counting. For example, if the student says “eighty-five, eighty-six, eighty-seven”, then halts and says, “eighty-seven, eighty-eight, eighty-nine”, the student should be given credit for reciting the numbers correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers eighty-five, eighty-six, eighty-seven and then stops, the student could restart counting from eighty-five and continue.

Performance Task Activity:

Say, “**Please count out loud for me starting with the number 85.**”

If the student correctly counts forward to 100 from the given number, the student is partially matched to the *Demonstrating* stage of the progression.

CNUM-5

Learning Target(s):	– Counts forward to 120 by 5s. (MGSE1.NBT.1)
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Exceeding

Process Clarification:

The student may self-correct, or repeat a number, if halted, to restart counting. For example, if the student says “five, ten, fifteen, twenty”, then halts and says, “twenty, twenty-five, thirty”, the student should be given credit for reciting the numbers correctly. The student should also be allowed to restart, if initiated by the student. For example, if the student recites numbers five, ten, fifteen, twenty and then stops, the student could restart counting from five and continue.

<h3><u>Performance Task Activity:</u></h3>
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Say, “**Please count out loud by fives, starting with the number five. Remember, count by fives.**”

If the student correctly counts forward to 120 by 5s, the student is partially matched to the *Exceeding* stage of the progression.

LEARNING PROGRESSION: COUNTING – OBJECTS

Big Idea: A kindergarten student will count using multiple strategies.				
Progression: Counting – Objects				
Beginning	Emerging	Developing	Demonstrating	Exceeding
<p>GKIDS Readiness Check Mathematics Activity 2</p> <p>Counts 10 objects using one-to-one correspondence.</p>	<p>COB-1 (Part A)</p> <p>Counts 1-10 objects presented in a line and tells the number of objects counted. Includes answering questions about “how many.”</p>	<p>COB-1 (Part C)</p> <p>When told a number 1-10, counts out that many objects (presented in a line).</p>	<p>COB-2 (Part C)</p> <p>When told a number 11-20, counts out that many objects.</p>	<p>COB-3 (Part A)</p> <p>Counts more than 20 objects, presented in a variety of ways (e.g., scattered, lines, rectangular array, circles).</p>
	<p>COB-1 (Part B)</p> <p>Given a set of up to 10 objects, matches a written numeral to represent the number of objects.</p>	<p>COB-1 (Part D)</p> <p>Writes numerals 1-10 to represent a quantity.</p>	<p>COB-2 (Part D)</p> <p>Writes numerals 11-20 to represent a quantity.</p>	<p>COB-3 (Part B)</p> <p>Given a set of more than 20 objects, matches a written numeral to represent the number of objects.</p>
		<p>COB-2 (Part A)</p> <p>Counts 11-20 objects presented in a line and tells the number of objects counted. Includes answering questions about “how many.”</p>	<p>COB-2 (Part E)</p> <p>Counts up to 20 objects when presented in a rectangular array or circle. Includes answering questions about “how many.”</p>	<p>COB-3 (Part C)</p> <p>Writes numerals greater than 20 to represent a quantity.</p>
		<p>COB-2 (Part B)</p> <p>Given a set of 11-20 objects, matches a written numeral to represent the number of objects.</p>	<p>COB-1 (Part E)</p> <p>Counts objects up to 10 in a scattered array. Includes answering questions about “how many.”</p>	
			<p>COB-1 (Part F)</p> <p>Answers questions about “one larger” in a set of up to ten objects using the number names.</p>	

CD-MA2.4b MGSEK.CC.4 MGSEK.MD.3	CD-MA1.4c MGSEK.CC.5a MGSEK.CC.5b	MGSEK.CC.3 MGSEK.CC.5a MGSEK.CC.5b	MGSEK.CC.3 MGSEK.CC.4c MGSEK.CC.5a MGSEK.CC.5b	MGSE1.NBT.1
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MATERIALS

Progression: Counting-Objects	
Task ID	Materials
GKIDS Readiness Check Mathematics Activity 2	<ul style="list-style-type: none"> – 12 to 15 small objects (e.g., pencils, crayons, manipulatives, etc.) – Template or ten-frame in which to place objects being counted
COB-1	<ul style="list-style-type: none"> – 10 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color) – Written numerals 1-10 (e.g., number cards) to represent the number of objects – Writing tools and paper – Template or counting frame in which to place objects
COB-2	<ul style="list-style-type: none"> – 20 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color) – Written numerals 11-20 (e.g., number cards) to represent the number of objects – Writing tools and paper – Template or counting frame
COB-3	<ul style="list-style-type: none"> – More than 20 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color) – Written numerals 21-30 (e.g., number cards) to represent the number of objects – Writing tools and paper – Template or counting frame

GKIDS Readiness Check Mathematics Activity 2

Learning Target(s): <i>Beginning</i>	– Counts 10 objects using one-to-one correspondence. (CD-MA2.4b, MGSEK.CC.4, MGSEK.MD.3)
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GKIDS is designed to provide teachers with a better understanding of where students are in their learning and development throughout the year. At the beginning of the year, teachers give the GKIDS Readiness Check to elicit evidence to show where a kindergarten student is when he or she enters kindergarten. The baseline data collected in the first six weeks on the GKIDS Readiness Check can serve as the entry point to skills described in the GKIDS 2.0 learning progression.

The following performance task is an activity from the GKIDS Readiness Check. For this progression, Mathematics Activity 2 from the GKIDS Readiness Check can be used to assess the *Beginning* stage of the progression.

If the student was rated as *Demonstrating* on Mathematics Activity 2, he or she can be matched to the *Beginning* stage of the progression.

If the student was rated below *Demonstrating* on Mathematics Activity 2, the teacher should continue instruction on counting objects and reassess the student when appropriate.

GKIDS Readiness Check Mathematics Activity 2

Counts at least 10 objects using one-to-one correspondence.

Activity	Performance Levels	
<p>Student will count the number of small objects provided by the teacher using one-to-one correspondence.</p> <p>Note: Underlined words represent objects used in this example. Teachers should use objects accessible in their classrooms.</p> <p>Place twelve to fifteen small objects in front of the student (i.e., in a pile or in a straight line). Ask the student to count the number of objects. Say, “I would like for you to count these <u>objects</u>. When you count, please say the numbers out loud.”</p> <p><u>Process Clarification:</u> The student must physically touch the objects to demonstrate counting using one-to-one correspondence. The teacher should be able to see that the student is associating one object with one spoken number by physically touching, moving, or sliding the objects. If the presentation of the objects needs to be adjusted during administration, it can be. For example, if the teacher presents the objects in a pile and the student does not respond, the teacher may then place the objects in a straight line.</p>	Not Yet Demonstrated	The student does not engage in the task or the student does not associate each object with one and only one number name.
	Emerging	The student counts between one and five objects using one-to-one correspondence.
	Developing	The student counts between six and nine objects using one-to-one correspondence.
	Demonstrating	The student counts ten objects using one-to-one correspondence.

<p><u>Materials:</u> Twelve to fifteen small objects (e.g., pencils, crayons, manipulatives, etc.)</p>	<p>Exceeding</p>	<p>The student counts more than ten objects using one-to-one correspondence.</p>
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COB-1

Learning Target(s): <i>Emerging</i> <i>Developing</i> <i>Demonstrating</i>	<ul style="list-style-type: none">– Counts 1-10 objects presented in a line and tells the number of objects counted. Includes answering questions about “how many.” (CD-MA1.4c, MGSEK.CC.5a)– Given a set of up to 10 objects, matches a written numeral to represent the number of objects. (MGSEK.CC.5b)– When told a number 1-10, counts out that many objects (presented in a line). (MGSEK.CC.5b)– Writes numerals 0-10 to represent a quantity. (MGSEK.CC.3)– Counts objects up to 10 in a scattered array. Includes answering questions about “how many.” (MGSEK.CC.5a)– Answers questions about “one larger” in a set of up to 10 objects using the number names. (MGSEK.CC.4c)
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Manipulatives or Materials:

- 10 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color)
- Written numerals 1-10 (e.g., number cards) to represent the number of objects
- Writing tools and paper
- Template or counting frame in which to place objects

Note: Refer to the *Optional Resource Guide* for optional written numerals for student use.

Process Clarifications:

Note: This task is designed to provide evidence of skills described in different stages of the progression. Allow the student to move through as many parts of the task as possible and record performance.

Part A, Part C, Part D, Part E:

Observe that the student is associating one object with one spoken number by maintaining correspondence with his or her eyes or by pointing, physically touching, moving, or sliding the objects. If necessary, prompt the student to point or physically touch objects to demonstrate one-to-one correspondence. To reduce confusion, ensure that objects are the same color.

Part D:

Due to varied development of fine motor and visual development, a reversal of numerals is anticipated for a majority of students. While reversals should be pointed out to students, the emphasis is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself. Similarly, students who transpose digits (e.g., 01 to represent ten) may need additional instruction; transposing digits would not represent a correct quantity.

If the student cannot write the number to represent a quantity, it will be helpful to know if the student can write the number when asked to write that number specifically. Writing numbers and representing a quantity with a written numeral are two distinct skills; however, within a level, concepts could be assessed together.

Part F:

The student should make the connection that if a set of objects is increased by one more object then the number name for that set is to be increased by one as well.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Part A:

Place up to 10 objects *in a straight line* in front of the student. Ask the student to count the number of objects. Say, “**I would like for you to count these objects. When you count, please say the numbers out loud.**”

When the student is finished counting, ask the student to verbally state the number of objects counted. Ask, “**How many objects are there?**” If the student correctly states the number of objects, continue to Part B.

Part B:

Place number cards 1-10 in order on the table in front of the student. Say, “**Let’s use numbers to tell how many. Which of these numbers could you use to show how many objects are in this set?**”

Part C:

Place up to 10 objects *in a straight line* in front of the student (use a different number of objects than used in previous parts of this task). Ask the student to count out a number of

objects up to ten. For example, say, **“Please count out X of these objects.”** Ask the student to count out two different numbers of objects between 1-10.

Part D:

Place up to 10 objects on the table in front of the student (use a different number of objects than used in previous parts of this task). Ask the student to count the number of objects and write the number. Say, **“I would like for you to count the objects and then write the number that shows how many objects are here.”**

If the student verbally says how many objects, remind the student, **“Please write how many objects you counted here.”** Ask the student to write at least two numbers to represent a quantity between 1-10.

Part E:

Place up to 10 objects on the table in front of the student *in a scattered array*. Ask the student to count the number of objects. Say, **“Please count these objects.”**

When the student is finished counting, ask the student to verbally state the number of objects counted. Ask, **“How many objects are there?”** If the student correctly states the number of objects, continue to Part F.

Part F:

Ask the student, **“How many would there be if we added one more object?”**

COB-2

Learning Target(s): <i>Developing</i> <i>Demonstrating</i>	<ul style="list-style-type: none">– Counts 11-20 objects presented in a line and tells the number of objects counted. Includes answering questions about “how many.” (MGSEK.CC.5a)– Given a set of 11-20 objects, matches a written numeral to represent the number of objects. (MGSEKCC.5b)– When told a number 11-20, counts out that many objects. (MGSEK.CC.5b)– Writes numerals 11-20 to represent a quantity. (MGSEK.CC.3)– Counts up to 20 objects when presented in a rectangular array or circle. Includes answering questions about “how many.” (MGSEK.CC.5a)
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Manipulatives or Materials:

- 20 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color)
- Written numerals 11-20 (e.g., number cards) to represent the number of objects
- Writing tools and paper
- Template or counting frame in which to place objects

Note: Refer to the *Optional Resource Guide* for optional written numerals for student use.

Process Clarification:

Note: This task is designed to provide evidence of skills described in different stages of the progression. Allow the student to move through as many parts of the task as possible and record performance.

Part A, Part B, Part C, Part D, Part E:

Observe that the student is associating one object with one spoken number by maintaining correspondence with his or her eyes or by pointing, physically touching, moving, or sliding the objects. If the presentation of the objects needs to be adjusted during administration, it can be. If necessary, prompt the student to point or physically touch objects to demonstrate one-to-one correspondence. To reduce confusion, ensure that objects are the same color.

Part D:

Due to varied development of fine motor and visual development, a reversal of numerals is anticipated for a majority of students. While reversals should be pointed out to students, the

emphasis is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself. Similarly, students who transpose digits (e.g., 71 to represent 17) may need additional instruction; transposing digits would not represent a correct quantity.

If the student cannot write the number to represent the group of objects, it will be helpful to know if the student can write the number when asked to write that number specifically. Writing numbers and representing objects with a written numeral are two distinct skills; however, we expect that within a level, concepts could be assessed together.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Part A:

Place 20 objects in a *straight line* in front of the student. Ask the student to count the number of objects. Say, “**I would like for you to count these objects. When you count, please say the numbers out loud.**” Observe the student associating one object with one spoken number by pointing, physically touching, moving, or sliding the objects.

When the student is finished counting, ask the student to verbally state the number of objects counted. Ask, “**How many objects are there?**” If the student correctly states the number of objects, continue to Part B.

Part B:

Place number cards 11-20 in order on the table in front of the student. Say, “**Let’s use numbers to tell how many. Which of these numbers could you use to show how many objects are in this set?**”

Part C:

Place up to 20 objects on the table in front of the student (use a different number of objects than used in previous parts of this task). Ask the student to count out a number of objects up to twenty. For example, say, “**Please count out X of these objects.**” Ask the student to count out two different numbers of objects between 11-20.

Part D:

Place up to 20 objects on the table in front of the student (use a different number of objects than used in previous parts of this task). Ask the student to count the number of objects

and write the number. Say, “**Please count these objects and write the number that shows how many objects are here.**”

If the student verbally says how many objects, remind the student, “**Please write the number that shows how many objects you counted.**” Ask the student to write at least two numbers to represent quantities between 11-20.

Part E:

Place up to 20 small objects on the table in front of the student in a *rectangular array or circle*. Ask the student to count the number of objects. Say, “**Please count these objects.**”

When the student is finished counting, ask the student to verbally state the number of objects counted. Ask, “**How many objects are there?**”

COB-3

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Counts more than 20 objects, presented in a variety of ways (e.g., scattered, lines, rectangular array, circles). (MGSE1.NBT.1)– Given a set of more than 20 objects, matches a written numeral to represent the number of objects. (MGSE1.NBT.1)– Writes numerals greater than 20 to represent a quantity. (MGSE1.NBT.1)
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Manipulatives or Materials:

- More than 20 counters, unifix cubes, counting bears, or other counting objects for each student (manipulatives should all be the same color)
- Written numerals 21-30 (e.g., number cards) to represent the number of objects
- Writing tools and paper
- Template or counting frame in which to place objects

Note: Refer to the *Optional Resource Guide* for optional written numerals for student use.

Process Clarification:

Part A:

If the presentation of the objects needs to be adjusted during administration, it can be. For example, if the student does not respond when objects are presented in a pile, then place the objects in other configurations (scattered, rectangular array, circle, etc.). To reduce confusion, ensure that objects are the same color. If necessary, prompt the student to point or physically touch objects to demonstrate one-to-one correspondence."

Part C:

Due to varied development of fine motor and visual development, a reversal of numerals is anticipated for a majority of students. While reversals should be pointed out to students, the emphasis is on the use of numerals to represent quantity rather than the correct handwriting formation of the actual numeral itself. Similarly, students who transpose digits (e.g., 82 to represent 28) may need additional instruction; transposing digits would not represent a correct quantity.

If the student cannot write the number to represent the group of objects, it will be helpful to know if the student can write the number when asked to write that number specifically.

Writing numbers and representing objects with a written numeral are two distinct skills; however, we expect that within a level, concepts could be assessed together.

Note: The supporting grade 1 standard, MGSE1.NBT.1, expects students to count to 120, read and write numerals, and represent a number of objects with a written numeral for objects up to 120. Therefore, for the *Exceeding* stage of the progression, it may be appropriate to ask students to count and write numbers to represent approximately 30 objects.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Part A:

Place more than 20 objects in front of the student. Ask the student to count the number of objects. Say, “**Please count these objects.**”

When the student is finished counting, ask the student to verbally state the number of objects counted. Ask, “**How many objects are there?**” Repeat the process with objects presented in a variety of ways (e.g., scattered, lines, rectangular array, circles). If the student correctly states the number of objects, each time the objects are presented, continue to Part B.

Part B:

Place number cards 21-30 in order on the table in front of the student. Say, “**Let’s use numbers to tell how many. Which of these numbers could you use to show how many objects are in this set?**”

Part C:

Place more than 20 objects on the table in front of the student. Ask the student to count the number of objects and write the number. Say, “**Please count these objects and write the number that shows how many objects are here.**”

If the student verbally says how many objects, remind the student, “**Please write the number that shows how many objects you counted.**” Ask the student write at least two numbers to represent objects greater than 20.

LEARNING PROGRESSION: COMPARE

Big Idea: A kindergarten student will compare objects and numbers represented in different ways to solve real-world problems.				
Progression: Compare				
Beginning	Emerging	Developing	Demonstrating	Exceeding
<p><u>COMP-1</u> Identifies/matches equal sets of objects using one-to-one correspondence.</p>	<p><u>COMP-2 (Part A)</u> Given two sets of objects, identifies whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (0-10 objects per set).</p>	<p><u>COMP-2 (Part B)</u> Explains and/or shows whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group between 0-10 per set using counting or matching strategies.</p>	<p><u>COMP-3 (Part B)</u> Compares two numbers between 1-10 presented as written numerals, with at least one number being between 6 and 10 (e.g., hold up the written numbers, points to or circles the number).</p>	<p><u>COMP-5</u> Solves real world problems by comparing two written numbers greater than 10, communicating their comparisons using words, models, or symbols.</p>
		<p><u>COMP-3 (Part A)</u> Compares two numbers between 1-5 presented as written numerals (e.g., hold up the written numbers, points to or circles the number).</p>	<p><u>COMP-4</u> Solves real world problems involving comparison of numbers of objects between 1-10—greater than, less than, equal to (e.g., use counting strategies, etc.).</p>	
CD-MA2.4a	MGSEK.CC.6	MGSEK.CC.6 MGSEK.CC.7 MGSEK.CC.4	MGSEK.CC.6 MGSEK.CC.7 MGSEK.CC.4	MGSE1.NBT.3 MGSE1.MD.4

MATERIALS

Learning Progression: Compare	
Task ID	Materials
COMP-1	<ul style="list-style-type: none"> – 20 objects to allow students to compare sets of up to 10 objects (e.g., counters, unifix cubes, counting bears, or other small counting objects). Manipulatives should be two different colors with 10 objects of each color. – Templates or ten frames in which to place sets being compared
COMP-2	<ul style="list-style-type: none"> – 20 objects to allow students to compare sets of up to 10 objects (e.g., counters, unifix cubes, counting bears, or other small counting objects). Manipulatives should be two different colors with 10 objects of each color. – Templates or ten frames in which to place sets being compared
COMP-3	<p><i>Part A:</i></p> <ul style="list-style-type: none"> – Two sets of written numerals 1 – 5 (e.g., number cards) <p><i>Part B:</i></p> <ul style="list-style-type: none"> – One set of written numerals 1 – 10 (e.g., number cards) – One set of written numerals 6 – 10 (e.g., number cards)
COMP-4	<ul style="list-style-type: none"> – Real-world problems involving comparison of numbers of objects within 10 (refer to the Sample Problems and Exemplar section). Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal. – Counters, unifix cubes, counting bears, or other counting objects in the classroom – Number lines, ten frames, or hundreds charts for comparing numbers greater than 10 – Writing tools and/or materials needed to record mathematical thinking
COMP-5	<ul style="list-style-type: none"> – Real-world problems involving comparison of written numbers greater than 10 but less than 20 (refer to the Exemplar section for a sample problem). Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal.

	<ul style="list-style-type: none">– Counters, unifix cubes, counting bears, or other counting objects in the classroom– Templates or ten frames in which to place sets being compared– Writing tools and/or materials needed to record mathematical thinking
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COMP-1

Learning Target(s): <i>Beginning</i>	<ul style="list-style-type: none">– Identifies/matches equal sets of objects using one-to-one correspondence. (CD-MA2.4a)
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Manipulatives or Materials:

- 20 objects to allow students to compare sets of up to 10 objects (e.g., counters, unifix cubes, counting bears, or other counting objects). Manipulatives should be two different colors with 10 objects of each color.
- Templates or ten frames in which to place sets being compared

Process Clarification:

For beginning learners, the teacher might arrange a line of objects that are placed close to one another and formed in a straight line. For students who have assimilated the one-to-one-correspondence skill, the teacher could arrange objects in alternate configurations (e.g., items in a circle, arc, block). The rationale for using a straight line of objects earlier in the students' development is that children often cannot attend to more than one feature of the task (e.g., number of items, spacing between items, etc.) to design an identical set indicating one-to-one-correspondence.

To demonstrate one-to-one-correspondence, the student could physically touch the objects in the sets or line them up next to (or on top of) each other. Although not a required component of the *Beginning* stage of this progression, the student might also demonstrate his or her knowledge of one-to-one-correspondence by counting aloud the number of objects as he/she places the objects next to or on top of the teacher's formed set. The teacher should note that the student is associating each object with only one other object. Further, the student could simply verbally state that the number of objects in the two sets match.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Say, “**Today, we are going to compare sets of objects. I’m going to give you two sets of objects.**”

Create two sets of small counting objects with quantities including and between 1 and 10. Sets should be arranged so that each set is distinct from the other and can be interpreted as a set by the student (i.e., with enough space between the two sets to be recognized as two separate sets, one in a straight line and one in a group). The arrangement of the objects can vary (e.g., in a line, an array, an arc, etc.).

Ask the student to determine if the sets are equal. Ask, “**Are these sets equal?**” or “**Are there the same number of objects A and objects B?**” Ask, “**Tell me how you know this.**” Observe the student demonstrating one-to-one correspondence. First ask the student to identify/match sets between 3-5 objects and then sets between 7-10 objects. For example, student can compare:

- 3 and 5 objects
- 4 and 4 objects
- 8 and 9 objects
- 10 and 9 objects
- 9 and 9 objects

If the student correctly identifies equal sets of objects between 1 and 10 with at least 80% accuracy, the student is fully matched to the *Beginning* stage of the progression. You should observe the student demonstrating one-to-one correspondence. For example, if you present the student with a group of blue bears, the student should match each red bear with a blue bear to show 1:1 correspondence.

COMP-2

Learning Target(s): <i>Emerging Developing</i>	<ul style="list-style-type: none">– Given two sets of objects, identifies whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (0-10 objects per set). (MGSEK.CC.6)– Explains and/or shows whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group between 0-10 per set using counting or matching strategies. (MGSEK.CC.6; MGSEK.CC.4)
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Manipulatives or Materials:

- 20 objects to allow students to compare sets of up to 10 objects (e.g., counters, unifix cubes, counting bears, or other counting objects). Manipulatives should be two different colors with 10 objects of each color.
- Templates or ten frames in which to place sets being compared

Process Clarification:

The student may use a variety of counting or matching strategies to compare the sets. Allow the student to move the counting objects as needed to employ various strategies.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Part A:

Say, “**Today, we are going to compare sets of objects. I’m going to give you two sets of objects.**”

Place two sets of objects in front of the student, each with a quantity including and between 0 and 10. Sets should be arranged so that each set is distinct from the other and can be interpreted as a set by the student (i.e., with enough space between the two sets to be recognized as two separate sets). The arrangement of the objects can vary (e.g., in a line, an array, an arc, etc.).

Say, “**I have two sets of objects. Tell me about these sets. Does one have more or less than the other, or are the sets equal?**” The student could point or orally respond with a statement that accurately compares the two groups created by the teacher (e.g., “This set has more than this set.”). If the student does not respond, teachers could rephrase the

directions and question **“Tell me which set has more objects.”**; **“Tell me which set has less (fewer) objects.”**; **“Do these sets have the same number of objects?”**

First ask the student to compare sets between 3-5 objects and then sets between 7-10 objects. The sets should not be significantly different from each other (e.g., comparing 2 and 9 objects). For example, student can compare:

- 3 and 5 objects
- 4 and 4 objects
- 8 and 9 objects
- 10 and 9 objects
- 9 and 9 objects

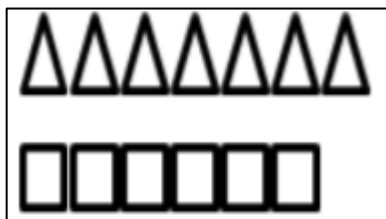
If the student correctly compares two sets of objects with at least 80% accuracy, the student is fully matched to the *Emerging* stage of the progression. Continue to Part B to assess a learning target in the *Developing* stage.

Part B:

With the sets of objects on the table, ask the student to explain the difference between the two sets of objects using counting or matching strategies. Ask, **“Can you tell or show me how you compared these two sets of objects?”**

The student should show or explain the difference between the two sets of objects using concrete language to demonstrate using counting or matching strategies. The student could say (or show):

- I lined up one square and one triangle. Since there is one extra triangle, there are more triangles than squares.” (matching strategy)



- “I counted the squares and I got 6. Then I counted the triangles and got 7. Since 7 is bigger than 6, there are more triangles than squares.” (counting strategy)
- “I put them in a pile. I then took away objects. Every time I took a square, I also took a triangle. When I had taken almost all of the shapes away, there was still a triangle left. That means there are more triangles than squares.” (adding and subtracting strategy)

If the student correctly explains the comparison between two sets of objects using counting or matching strategies with at least 80% accuracy, the student is partially matched to the *Developing* stage of the progression.

COMP-3

Learning Target(s): <i>Developing</i> <i>Demonstrating</i>	<ul style="list-style-type: none">– Compares two numbers between 1-5 presented as written numerals (e.g., hold up the written numbers, points to or circles the number). (MGSEK.CC.7)– Compares two numbers between 1-10 presented as written numerals, with at least one number being between 6 and 10 (e.g., hold up the written numbers, points to or circles the number). (MGSEK.CC.7)
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Manipulatives or Materials:

Part A:

- Two sets of written numerals 1 -5 (e.g., number cards)

Part B:

- One set of written numerals 1 -10 (e.g., number cards)
- One set of written numerals 6 – 10 (e.g., number cards)

Note: Refer to the *Optional Resource Guide* for optional written numerals for student use.

Process Clarification:

Teachers should consider using written numerals that clearly distinguish 6 and 9 from one another. For example, numbers represented as 6 and 9. This orientation might be helpful depending on whether the student is sitting next to or across from the teacher during the activity as the numerals are shown.

Performance Task Activity:

Part A:

Separately mix two sets of written numerals 1-5 and keep each pile separate. Show one numeral from each set and ask the student to compare the two digits shown. Say, “**Which number is greater?**” or “**Which number is less?**” Repeat the activity, varying the prompt, until you have used all pairs of 1-5 written numerals. The student should have the opportunity to compare numbers that are equal. If randomly selected numerals are not the same, you should specifically show the student two written numerals that are the same. The student should indicate this in his or her response (e.g., “They are the same.” or “They are equal.”).

If the student correctly compares written numerals with at least 80% accuracy, the student is partially matched to the *Developing* stage of the progression. Continue to Part B to assess a learning target in the *Demonstrating* stage.

Part B:

Separately mix the 1-10 and the 6-10 written numerals and keep each pile separate. Flip over one numeral from each set and ask the student to compare the two digits shown. Say, **“Which number is greater?”** or **“Which number is less?”** Repeat the activity, varying the prompt, until you have used all the 6-10 written numerals. The student should have the opportunity to compare numbers that are equal. If randomly selected numerals are not the same, you should specifically show the student two written numerals that are the same. The student should indicate this in his or her response (e.g., “They are the same.” or “They are equal.”).

If the student correctly compares written numerals with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

COMP-4

Learning Target(s): <i>Demonstrating</i>	– Solves real world problems involving comparison of numbers of objects between 1-10—greater than, less than, equal to (e.g., use counting strategies, etc.). (MGSEK.CC.6; MGSEK.CC.4)
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Manipulatives or Materials:

- Real-world problems involving comparison of numbers of objects within 10 (refer to the Sample Problems and Exemplar section). Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal.
- Counters, unifix cubes, counting bears, or other counting objects in the classroom
- Number lines, ten frames, or hundreds charts for comparing numbers greater than 10
- Writing tools and/or materials needed to record mathematical thinking

Process Clarification:

The teacher may read the problem to the student as many times as needed.

The teacher can also prompt the student to explain the solution if no evidence of a response is observed. Say, “**Tell me how you found the answer.**” or “**Can you show me how you solved the problem?**”

Performance Task Activity:

Have a variety of problem-solving tools (e.g., counters, unifix cubes, counting bears, and writing tools or materials for recording mathematical thinking) available for student access. Direct the student’s attention to the tools available for problem solving. Review the tools provided and directions for the activity. Say, “**Today we are going to solve a story problem. I will read you the problem, and you will find the answer. You can show your work with objects, pictures, numbers, or words.**”

Show the student a real-world problem involving comparison of numbers. Read the problem aloud to the student and direct the student to solve the problem. Direct the student’s attention to the visual representation of the problem and say, “**Listen as I read the problem.**” For example, refer to the sample problems. Say, “**Solve the problem. You can tell me your answer or share your thinking with objects, pictures, numbers, or words.**” Repeat this activity with a few real-world problems involving comparison of number of objects – greater than, less than, equal.

If the student correctly solves real world problems involving comparison of numbers of objects between 1-10 with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

Sample Problems and Exemplars:

The student solves real-world problems comparing numbers of objects. The student draws a picture, uses a model, writes, or verbally explains his or her problem-solving strategy. If the student has no physical evidence of a response, then when prompted, the student should be able to provide an oral response to the problem presented by the teacher. The teacher should observe the student choosing and employing appropriate counting strategies to compare.

#1 Sample Problem:

Ms. Gomez gives her students a sticker each time they read a book. Brian earned 5 stickers this week and Debra earned 3.

Who earned more stickers?

You can show your work with objects, pictures, numbers, or words.

The student should identify that Brian earned more stickers than Debra. For example, "Brian earned more stickers than Debra. I know this because Brian has 5 stickers and Debra only has 3 stickers. 5 is more than 3 so Brian has more stickers."

#2 Sample Problem:

Kevin gives his cat and dog a treat each time they do a trick. He gave his cat 4 treats and he gave his dog 4 treats.

Who earned more treats?

You can show your work with objects, pictures, numbers, or words.

The student should identify that Jason gave his cat and dog the same number of treats. For example, "Jason gave his cat the same number of treats as his dog. I know this because the number of treats his cat and dog have are equal."

#3 Sample Problem:

Kendra and Beth each have new pencils. Kendra has 6 pencils and Beth has 7 pencils.

Who has fewer pencils?

You can show your work with objects, pictures, numbers, or words.

The student should identify that Kendra has fewer pencils than Beth. For example, "Kendra has less pencils than Beth. I know this because Kendra only has 6 pencils and Beth has 7 pencils. 6 is less than 7 so Kendra has less pencils."

#4 Sample Problem:

James and Kellan collect rocks on the playground. James collected 10 rocks and Kellan collected 8 rocks.

Which boy collected more rocks?

You can show your work with objects, pictures, numbers, or words.

The student should identify that James collected more rocks than Kellan. For example, "James collected more rocks than Kellan. I know this because James collected 10 rocks and Kellan collected 8 rocks. 10 is more than 8 so James has more rocks."

#5 Sample Problem:

Henry buys oranges and apples to make a salad. Henry buys 9 oranges and 9 apples.

Did Henry buy more oranges or apples?

You can show your work with objects, pictures, numbers, or words.

The student should identify that Henry buys the same number of oranges and apples. For example, "Henry buys an equal number of oranges and apples. I know this because the number of oranges and apples is the same."

COMP-5

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Solves real world problems by comparing two written numbers greater than 10, communicating their comparisons using words, models, or symbols. (MGSE1.NBT.3; MGSE1.MD.4)
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Manipulatives or Materials:

- Real-world problems involving comparison of written numbers greater than 10 but less than 20 (refer to the Exemplar section for a sample problem). Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal.
- Counters, unifix cubes, counting bears, or other counting objects in the classroom
- Number lines, ten frames, or hundreds charts for comparing numbers
- Writing tools and/or materials needed to record mathematical thinking

Process Clarification:

The student does not have to use objects to build the larger numbers for comparison but may choose to do so if he or she desires. Providing a number line or hundreds chart may help to support students in comparing and writing two-digit numbers between 11 and 20.

The teacher may read the problem to the student as many times as needed.

The teacher can also prompt the student to explain the solution if no evidence of a response is observed. Say, “**Tell me how you found the answer.**” or “**Can you show me how you solved the problem?**”

Performance Task Activity:

Show the student a real-world problem involving comparison of written numbers between 11 and 20. Read the problem aloud to the student and ask the student to solve the problem. Direct the student’s attention to the visual representation of the problem and say, “**Listen as I read the problem. Solve the problem. You can show your work with objects, pictures, numbers, or words.**”

If the student correctly solves real world problems by comparing two written numbers greater than 10 with at least 80% accuracy, the student is fully matched to the *Exceeding* stage of the progression.

Sample Problems and Exemplars:

The student should select and implement an appropriate strategy to compare the numbers given in the problem. The teacher may observe the student using a number line or hundreds chart to locate the numbers in relation to each other. The student should produce some evidence (picture, model, writing, or explanation) of their problem-solving strategy. If the student has no physical evidence of a response, then when prompted, the student should be able to provide an oral response to the problem presented by the teacher.

#1 Sample Problem:

Mr. Allen needs to paint for a big school art project. He buys 13 cans of red paint and 11 cans of yellow paint.

Mr. Allen had fewer cans of which color?

The student should identify that Mr. Allen purchased less yellow paint. The teacher should observe the student using an appropriate strategy to compare written numbers between 11 and 20. For example, “Mr. Allen purchased fewer yellow paint cans than red.”

- “I counted and 13 comes after 11, so 11 is less than 13.”
- “On the number line 11 is before 13. This means Mr. Allen bought less yellow paint.”

#2 Sample Problem:

Ben and Paul collect toy cars.

Ben has 19 cars, and Paul has 12. Who has more cars?

The student should identify that Ben has more cars than Paul. For example, “Ben has more cars than Paul. I know this because Ben has 19 cars and Paul only has 12 cars. 19 is more than 12 so Ben has more cars.” The teacher should observe the student using an appropriate strategy to compare written numbers between 11 and 20.

- “On the hundreds chart 19 comes after 12 so Ben has more cars.”
- “I counted and 19 comes after 12, so 19 is greater than 12. Paul has less cars than Ben.”

#3 Sample Problem:

Cory brought 16 cupcakes to school for his birthday.

If there are 18 students in Cory’s class, does he have enough cupcakes to share with everyone?

The student should identify that Cory does not have enough cupcakes to share with the class. For example, “Cory does not have enough cupcakes for his class. I know this because Cory has 16 cupcakes but there are 18 students in the class. 16 is less than 18 so he does not have enough.” The teacher should observe the student using an appropriate strategy to compare written numbers between 11 and 20.

- “On the hundreds chart 18 comes after 16 so Cory doesn’t have enough cupcakes for the class.”
- “I counted and 18 comes after 16, so 16 is less than 18. There are more students than cupcakes.”

#4 Sample Problem:

Kate needs balloons for her birthday. Store A has 17 balloons. Store B has 20 balloons.

Which store has more balloons?

The student should identify that Store B has more balloons. The teacher should observe the student using an appropriate strategy to compare written numbers between 11 and 20. For example, “Store B has more balloons than Store A.”

- “On the hundreds chart 20 comes after 17 so Store B has more balloons.”

“On the number line 20 is after 17 so it’s greater. This means Store B has more than Store A.”

#5 Sample Problem:

Mrs. Timms brought 17 lollipops to share with her students.

If there are 17 students in her class, will she have any lollipops left after she shares?

The student should identify that Mrs. Timms will not have any lollipops left because she has an equal number of lollipops and students. For example, “Mrs. Timms will not have any lollipops left after she shares. I know this because she has 17 lollipops and 17 students in the class. There are the same number of lollipops as students.” The teacher should observe the student using an appropriate strategy to compare written numbers between 11 and 20.

- “Both numbers are the same, so she has just enough.”
- “She has an equal number of lollipops and students. There won’t be any left over.”

LEARNING PROGRESSION: ADDITION AND SUBTRACTION

Big Idea: A kindergarten student will apply multiple strategies to solve real world problems using addition and subtraction.				
Progression: Addition and Subtraction (Note: This progression may begin later in the year after progress is made with counting and other prerequisite skills.)				
Beginning	Emerging	Developing	Demonstrating	Exceeding
<p><u>ADSU-1</u> Uses objects or fingers to represent and solve real-world addition and subtraction problems (result unknown) within 5, when read aloud.</p>	<p><u>ADSU-2</u> Uses objects or drawings to represent and solve real-world addition and subtraction problems (result unknown and change unknown) within 5, when read aloud.</p>	<p><u>ADSU-3</u> Uses counting strategies (e.g., ten frame, counting on, counting back, mental images, number lines, acting out) to solve addition and subtraction problems within 10 (result unknown, change unknown, start unknown within 5).</p>	<p><u>ADSU-6</u> Solves real-world problems by adding and subtracting within 10 (result unknown, change unknown, and start unknown), and explains the strategy used. The strategy can include a drawing or equation.</p>	<p><u>ADSU-9</u> Solves real-world problems by adding and subtracting within 11 to 19, and explains the strategy used. The strategy can include a drawing or equation.</p>
		<p><u>ADSU-4 (Part A)</u> Finds the missing number to make 5 (e.g., using ten frame, number lines).</p>	<p><u>ADSU-4 (Part B)</u> Finds the missing number to make 10 (e.g., using ten frame, number lines).</p>	
		<p><u>ADSU-5</u> Decomposes numbers into pairs in more than one way, using objects or drawings, within 10 (e.g., $9=4+5$, $9=8+1$)</p>	<p><u>ADSU-7</u> Responds immediately and accurately (verbally) to addition and subtraction problems within 5.</p>	<p><u>ADSU-10</u> Responds immediately and accurately, verbally or in writing, to addition and subtraction problems within 10.</p>
			<p><u>ADSU-8</u> Composes and decomposes numbers from 11 to 19 into ten ones and some further ones by using objects or drawings. Records compositions or decompositions by a drawing or equation (e.g., $18=10+8$)</p>	<p><u>ADSU-11</u> Recognize “a ten” as a bundle of ten ones, numbers from 11 to 19 as one ten and some leftover ones, and decade numbers 10 to 90 as a group of tens with no leftover ones.</p>

CD-MA2.4c	MGSEK.OA.1 MGSEK.OA.2	MGSEK.OA.1 MGSEK.OA.2 MGSEK.OA.3 MGSEK.OA.4 MGSEK.CC.2 MGSEK.CC.4a	MGSEK.OA.1 MGSEK.OA.2 MGSEK.OA.3 MGSEK.OA.4 MGSEK.OA.5 MGSEK.NBT.1	MGSE1.OA.1 MGSE1.OA.2 MGSE1.OA.6a MGSE1.OA.6b MGSE1.NBT.2
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MATERIALS

Progression: Addition and Subtraction	
Task ID	Materials
ADSU-1	<ul style="list-style-type: none"> – Problem-solving tools such as ten frame or arithmetic rack – At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects) – Writing tools and paper
ADSU-2	<ul style="list-style-type: none"> – Problem-solving tools such as ten frame or arithmetic rack – At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects) – Writing tools and paper
ADSU-3	<ul style="list-style-type: none"> – Problem-solving tools such as ten frame or arithmetic rack – At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects) – Writing tools and paper
ADSU-4	<ul style="list-style-type: none"> – Problem-solving tools such as counters, unifix cubes, counting bears, ten frame, paper, writing tools, or arithmetic racks available for the student – At least 10 counting objects to fill ten frame (or pencil if using a printed version)
ADSU-5	<ul style="list-style-type: none"> – Ten frame, number lines, 10 counters, unifix cubes, counting bears, or other counting objects of two different colors (10 of each color) – Writing tools of two different colors and paper
ADSU-6	<ul style="list-style-type: none"> – Real-world problems involving addition and subtraction within 10 to be read aloud. Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal. – Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors. – Writing tools and paper

ADSU-7	<ul style="list-style-type: none"> – Addition and subtraction expressions within 5. These could be printed on paper or presented digitally.
ADSU-8	<ul style="list-style-type: none"> – Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors. – Writing tools and paper
ADSU-9	<ul style="list-style-type: none"> – Real-world problems involving addition and subtraction within 11-19 to be read aloud. Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal. – Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors. – Writing tools and paper
ADSU-10	<ul style="list-style-type: none"> – Addition and subtraction expressions within 10 (e.g., 5 addition and 5 subtraction expressions within 6 - 10). These could be printed on paper or presented digitally. – Writing tools and paper
ADSU-11	<p><i>Part A</i></p> <ul style="list-style-type: none"> – Number cards 11 to 19 – 20 objects (e.g., counters, unifix cubes, counting bears, or other counting objects) – Ten frame <p><i>Part B</i></p> <ul style="list-style-type: none"> – Cards of decade numbers 10 to 90 – Unifix cubes or place value (base 10) rods

ADSU-1

Learning Target(s): <i>Beginning</i>	<ul style="list-style-type: none">– Uses objects or fingers to represent and solve real-world addition and subtraction problems (result unknown) within 5, when read aloud. (CD-MA2.4c)
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Manipulatives or Materials:

- Problem-solving tools such as ten frame or arithmetic rack
- At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects)
- Writing tools and paper

Process Clarification:

There are three types of addition and subtraction problems: result unknown ($1 + 4 = \underline{\quad}$), change unknown ($5 - \underline{\quad} = 4$), and start unknown ($\underline{\quad} + 3 = 5$). In this performance task, the student will have the opportunity to solve result unknown problems.

The teacher can show and read the problem to the student as many times as needed.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Give the student at least 5 objects. Say, “**Today we are going to solve story problems. I will read the problem to you, and you will find the answer. You can use these objects or your fingers to help you find the answer.**” Direct the student’s attention to the objects.

Read the problems aloud to the student. Say, “**Listen as I read the story problem.**” Say, “**Solve the story problem. I want you to use these objects or your fingers to help you find the answer.**”

If the student correctly represents and solves real-world addition and subtraction problems within 5 when the result is unknown, with at least 80% accuracy, the student is fully matched to the *Beginning* stage of the progression.

Sample Problems:

- There was 1 bee on a flower. Then 3 more bees came. How many bees are on the flower now? (addition)

- There were 2 frogs in a pond. Then 2 more frogs came. How many frogs are in the pond now? (addition)
- Sam ate 3 eggs for breakfast. He ate 2 more eggs for lunch. How many eggs did Sam eat? (addition)
- Liam buys 5 books from the store. He gives 2 books to his sister. How many books does Liam have now? (subtraction)
- There were 4 birds in a nest. Then 1 bird left the nest. How many birds are in the nest now? (subtraction)
- There were 5 bees in a hive. Then 4 bees left the hive. How many bees are in the hive now? (subtraction)

ADSU-2

Learning Target(s): <i>Emerging</i>	<ul style="list-style-type: none">– Uses objects or drawings to represent and solve real-world addition and subtraction problems (result unknown and change unknown) within 5, when read aloud. (MGSEK.OA.1, MGSEK.OA.2)
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Manipulatives or Materials:

- Problem-solving tools such as ten frame or arithmetic rack
- At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects)
- Writing tools and paper

Process Clarification:

There are three types of addition and subtraction problems: result unknown ($1 + 4 = \underline{\quad}$), change unknown ($5 - \underline{\quad} = 4$), and start unknown ($\underline{\quad} + 3 = 5$). In this performance task, the student will have the opportunity to solve result unknown and change unknown problems.

The teacher can show and read the problem to the student as many times as needed.

Performance Task Activity:

Provide objects, a piece of paper, and a writing tool for the student. Say, **“Today we are going to solve story problems. I will read the problem to you, and you will find the answer. You can use these objects or draw pictures to help you find the answer.”**

Direct the student’s attention to the objects, writing tool, and paper.

Read the problems aloud to the student. Say, **“Listen as I read the story problem.”** Say, **“Solve the story problem. You can use these objects or draw pictures to help you find the answer.”** Observe the student. The student may respond orally or draw correct representations.

If the student chooses to draw, the drawings do not have to be detailed, but should show the strategy the student used to solve the problem. Drawings could include but are not limited to:

- two sets of objects combined
- a set of objects with several crossed out
- a five frame or ten frame with objects (to fill or remove)
- a number line

If the student correctly represents and solves result unknown and change unknown addition and subtraction problems with at least 80% accuracy, the student is fully matched to the *Emerging* stage of the progression.

Sample Problems:

- Jenny brought 5 cupcakes to school. She shared 3 with her friends at lunch. How many cupcakes does Jenny have left? (result unknown, subtraction)
- Tim has 2 toy cars, and Amy has 1 toy car. How many toy cars do they have all together? (result unknown, addition)
- The bird had 5 seeds. She had 1 seed left at the end of the day. How many seeds did she eat? (change unknown, subtraction)
- Ted had 2 blocks. He got more blocks the next day at school. After school, he had 5 blocks. How many blocks did Ted get at school? (change unknown, addition)
- Mr. Reed had 4 glue sticks to give his students for an art project. He had 2 glue sticks left on his desk at the end of class. How many glue sticks did he give his students? (change unknown, subtraction)

ADSU-3

Learning Target(s): <i>Developing</i>	<ul style="list-style-type: none">– Uses counting strategies (e.g., ten frame, counting on, counting back, mental images, number lines, acting out) to solve addition and subtraction problems within 10 (result unknown, change unknown, start unknown within 5). (MGSEK.OA.1, MGSEK.OA.2, MGSEK.CC.2, MGSEK.CC.4a)
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Manipulatives or Materials:

- Problem-solving tools such as ten frame or arithmetic rack
- At least 5 objects to allow students to represent and solve problems within 5 (e.g., counters, unifix cubes, counting bears, or other counting objects)
- Writing tools and paper

Process Clarification:

There are three types of addition and subtraction problems: result unknown ($5 + 4 = \underline{\quad}$), change unknown ($8 - \underline{\quad} = 4$), and start unknown ($\underline{\quad} + 3 = 10$). Beginning with result unknown problems, the student should have the opportunity to solve each type of problem in this performance task. However, start unknown problems need only be solved within 5 at this level of the progression.

The teacher can read the problem to the student as many times as needed.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Have problem-solving tools (e.g., counters, unifix cubes, counting bears, ten frame, paper, writing tools, arithmetic racks) available for the student. Direct the student's attention to the tools available for problem solving. Review the tools provided and any procedures that need to be followed. Say, "**Today we are going to solve story problems. I will read the problem to you, and you will find the answer. You can use any of these tools to help you find the answer.**"

Show and read the problem aloud to the student. Say, "**Listen as I read the story problem.**" Say, "**Solve the story problem. You can use any of these objects to help you find the answer.**"

If the student correctly solves the three types of real-world addition and subtraction problems with at least 80% accuracy, the student is partially matched to the *Developing* stage of the progression.

Sample Problems:

- Cory had 5 balloons. His mom gave him 4 more. How many balloons does Cory have altogether? (result unknown, addition)
- The bunny had 8 carrots. She had 2 carrots left after dinner. How many carrots did she eat? (change unknown, subtraction)
- Tom had 6 marbles. He got more marbles the next day at school. After school, he had 9 marbles. How many marbles did Tom get at school? (change unknown, addition)
- Todd had some toy cars. He got 2 more cars for his birthday. After his birthday, he had 5 toy cars. How many toy cars did Todd have before his birthday? (start unknown, addition)
- Carlos has some bottles of glue at home. He uses 1 bottle for a school project. After the project, he has 2 bottles of glue left at home. How many bottles of glue did Carlos have before the project? (start unknown, subtraction)

ADSU-4

Learning Target(s): <i>Developing</i> <i>Demonstrating</i>	<ul style="list-style-type: none">– Finds the missing number to make 5 (e.g., using ten frame, number lines). (MGSEK.OA.4)– Finds the missing number to make 10 (e.g., using ten frame, number lines). (MGSEK.OA.4)
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Manipulatives or Materials:

- Problem-solving tools such as counters, unifix cubes, counting bears, ten frame, paper, writing tools, or arithmetic racks available for the student
- At least 10 counting objects to fill ten frame (or pencil if using a printed version)

Process Clarification:

The teacher can read the problem to the student as many times as needed.

Performance Task Activity:

Have problem solving tools and objects available for the student. Direct the student's attention to the tools available for problem solving. Review the tools provided and any procedures that need to be followed. Say, "**Today, I will read a story problem to you, and you will find the answer. You can use any of these tools to help you find the answer.**" The student can find the missing number by using objects or drawings.

Part A:

Ask students to find the missing number to make 5. For example:

- I need to have 5 chairs at the table. I have 3. How many more chairs do I need?
- We need 5 eggs to make a cake. I have 2 eggs. How many more eggs do we still need?
- Sara needs 5 cans of paint to paint her room. She has 1 can. How many more cans does Sara need?
- There are 5 students in class who need pens. Mr. Wayne has 4 pens. How many more students need pens?
- I need to have 5 chairs at the table. I have 5. How many more chairs do I need?

If the student correctly finds the missing number to make 5 with at least 80% accuracy, the student is partially matched to the *Developing* stage of the progression. Continue to Part B to assess a learning target in the *Demonstrating* stage.

Part B:

Ask students to find the missing number to make 10. For example:

- A full case of juice has 10 boxes. There are only 6 boxes in this case. How many juice boxes are missing?
- The pie recipe needs 10 apples. There are 4 apples at home. How many more apples are needed?
- Mrs. Perry gave out 10 books to her students. Her students gave back 9 books. How many books are missing?
- Ben invited 10 friends to his party. There are 3 friends are at the party now. How many friends are missing?
- Jan needs 10 stickers a week to earn a prize. She has 7 stickers. How many more stickers does Jan need to earn a prize?

If the student correctly finds the missing number to make 10 with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

ADSU-5

Learning Target(s): <i>Developing</i>	<ul style="list-style-type: none">– Decomposes numbers into pairs in more than one way, using objects or drawings, within 10 (e.g., $9=4+5$, $9=8+1$). (MGSEK.OA.3)
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Manipulatives or Materials:

- Ten frame, number lines, 10 counters, unifix cubes, counting bears, or other counting objects of two different colors (10 of each color)
- Writing tools of two different colors and paper

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Have objects (ten frame, number lines, different colored counters) or drawing tools available for the student. Explain and model the task for the student. Say, “**Today I would like you to show me different ways to make numbers. I want you to use these objects to show me all the ways you can make numbers. For example, if I ask you to show me how to make 4, you could use 2 of the red objects and 2 of the blue objects.**” Take two of each color object and place them on the table creating one group of four. “**2 red objects and 2 blue objects make 4 when they are put together. Can you show me another way to make 4 using the red objects and the blue objects?”** Allow the student to model (or draw if using writing tools and paper) another combination of numbers that make 4 to verify that they understand the task.

Continue having the student decompose numbers within 10. Say, “**Use these objects. Show me one way you could make ___ using these red and blue objects.**” Allow the student to model (or draw if using writing tools and paper) different pairs of numbers that create the number given by the teacher.

Ask, “**Can you show me another way you could make ___ using these red and blue objects?”** Students should decompose using a different number combination.

If the student correctly decomposes numbers within 10 with at least 80% accuracy, the student is partially matched to the *Developing* stage of the progression.

ADSU-6

Learning Target(s): <i>Demonstrating</i>	<ul style="list-style-type: none">– Solves real-world problems by adding and subtracting within 10 (result unknown, change unknown, and start unknown), and explains the strategy used. The strategy can include a drawing or equation. (MGSEK.OA.1, MGSEK.OA.2)
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Manipulatives or Materials:

- Real-world problems involving addition and subtraction within 10 to be read aloud. Printed versions of the real-world problems could include: digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal.
- Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors.
- Writing tools and paper

Process Clarification:

There are three types of addition and subtraction problems: result unknown ($5 + 4 = \underline{\quad}$), change unknown ($8 - \underline{\quad} = 4$), and start unknown ($\underline{\quad} + 3 = 10$). The student should have the opportunity to solve each type of problem in this performance task.

The teacher can read the problem to the student as many times as needed.

Performance Task Activity:

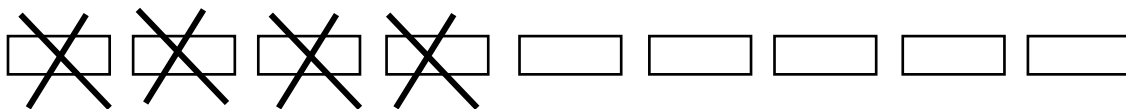
Present the student with a real-world addition problem and a real-world subtraction problem within 10. Say, **“Today we are going to solve a story problem. I will read the problem to you, and I want you to find the answer. Listen as I read the story problem.”** Say, **“Solve the story problem.”** Allow the students ample time to solve the problem by drawing, using manipulatives, writing equations, or responding orally.

After the student has solved the problem, ask the student to explain the strategy he or she used to solve the problem. Say, **“Tell me how you found your answer.”**

Sample Problems:

The student produces some evidence of a strategy (e.g., drawing, manipulatives, equation, or oral response) and when asked can explain the strategy used.

- José and Beth have 9 pencils all together. Beth has 4 pencils. How many pencils does José have? (result unknown)



- Isabella uses 6 square blocks and 3 rectangle blocks to build a tower. How many blocks are in Isabella's tower in all? (result unknown)



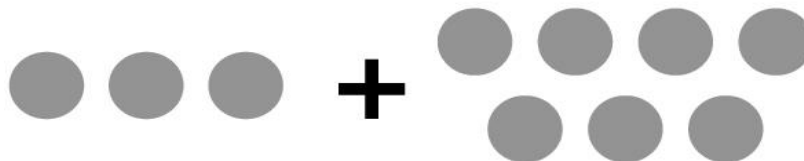
- Marcus brought 10 donuts to school. He shared 6 with his friends at lunch. How many donuts does Marcus have left? (result unknown)



- A group of squirrels collects 8 nuts. They had 4 nuts left at the end of the day. How many nuts did they eat? (change unknown)



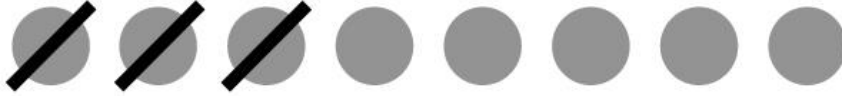
- Beverly uses 3 oranges and 7 lemons to make a cake. How many pieces of fruit does Beverly use in all? (result unknown)



- A boy had some baseballs. He lost 4 of them. Now the boy has 3 baseballs. How many baseballs did the boy have in the beginning? (start unknown)



- A group of friends were planning a trip to the park. Three more friends decided to join them. Now there are 8 friends going to the park. How many friends were going to the park to start? (start unknown)



If the student correctly solves addition and subtraction problems and explains the strategy used with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

ADSU-7

Learning Target(s): <i>Demonstrating</i>	<ul style="list-style-type: none"> – Responds immediately and accurately (verbally) to addition and subtraction problems within 5. (MGSEK.OA.5)
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Manipulatives or Materials:

- Addition and subtraction expressions within 5. These could be printed on paper or presented digitally.

Note: Refer to the *Optional Resource Guide* for a copy of the Optional Recording Sheet with Sample Problems.

Performance Task Activity:

Explain the activity to the student. Say, “**I am going to show you addition and subtraction problems. Tell me the answer to each problem out loud.**” Show and read aloud each problem to the student and observe how long it takes them to say the answer.

Optional Recording Sheet with Sample Problems:

#	Addition	Student Response	#	Subtraction	Student Response
1	1 + 4		5	5 – 2	
2	2 + 3		6	4 – 3	
3	3 + 2		7	5 – 4	
4	4 + 1		8	3 – 2	
			9	5 – 3	
			10	4 – 1	

If the student correctly responds verbally to determine the correct sum or difference in about 3-5 seconds without resorting to counting strategies with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

ADSU-8

Learning Target(s): <i>Demonstrating</i>	<ul style="list-style-type: none">– Composes and decomposes numbers from 11 to 19 into ten ones and some further ones by using objects or drawings. Records compositions or decompositions by a drawing or equation (e.g., $18 = 10 + 8$). (MGSEK.OA.3, MGSEK.NBT.1)
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Manipulatives or Materials:

- Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors
- Writing tools and paper to record mathematical thinking

Process Clarification:

It may be necessary to demonstrate an example to the student to ensure he or she understands the directions.

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Have ten frame, paper, and writing tools available on the table for the student to use. Explain the task to the student. Say, “**Today we are making numbers greater than 10. I want you to use the objects to show me what number can be added to 10 to make another number. When you are finished you can draw a picture or write the equation on your paper to show your thinking.**” Students should separate out each set of 11-19 objects into a group of ten objects with leftovers.

Composing:

For composing, ask the student to make a number between 11 and 19. Say, “**Show me how to make ___.**” Prompt the student to write an equation or draw to record their thinking. Prompt students, “**Write an equation or draw a picture to show how ___ is made.**” Ask, “**How many groups of ten are in the number ___? How many ones are in the number ___?**” The student should write an equation or draw on their paper. For example, for 15, student could write the equation: $15 = 10 + 5$. Repeat this process with a range of several other numbers between 11 and 19.

Sample Problems:

- 15
- 12
- 19
- 17
- 14

If the student correctly composes numbers from 11 to 19 into ten ones and some further ones with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

Decomposing:

For decomposing, provide the student with a group of between 11 and 19 objects. Say, **“Here is a group of __ objects. Show me how many objects can be added to 10 to make __.”** Allow the student time to decompose the group of objects provided by the teacher. Prompt the student to write an equation or draw to record their thinking. Say, **“Write an equation or draw a picture to show how __ is made.”** The student should write an equation or draw on their paper. Repeat this process with a range of several other numbers between 11 and 19.

Sample Problems:

- 13
- 11
- 18
- 16
- 19

If the student correctly decomposes numbers from 11 to 19 into ten ones and some further ones with at least 80% accuracy, the student is partially matched to the *Demonstrating* stage of the progression.

ADSU-9

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Solves real-world problems by adding and subtracting within 11 to 19, and explains the strategy used. The strategy can include a drawing or equation. (MGSE1.OA.1, MGSE1.OA.6a)
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Manipulatives or Materials:

- Real-world problems involving addition and subtraction within 11-19 to be read aloud. Printed versions of the real-world problems could include digital slide, chart paper, printed document, or a sticker to place in a problem-solving journal.
- Ten frame (copies on paper or manipulatives), number lines, or at least 19 counters, unifix cubes, counting bears, or other counting objects of two different colors.
- Writing tools and paper to record mathematical thinking

Process Clarification:

There are three types of addition and subtraction problems: result unknown ($11 + 4 = \underline{\quad}$), change unknown ($19 - \underline{\quad} = 8$), and start unknown ($\underline{\quad} + 9 = 18$). The student should have the opportunity to solve each type of problem in this performance task.

The teacher can read the problem to the student as many times as needed.

Performance Task Activity:

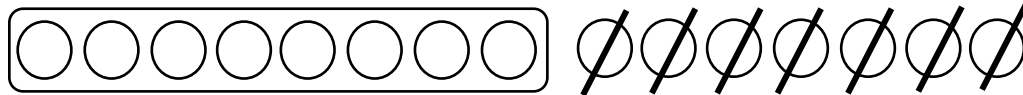
Present the student with real-world addition and subtraction problems within 11-19. Say, **“Today we are going to solve a story problem. I will read you the problem, and I want you to find the answer. Listen as I read the story problem.”** Say, **“Solve the story problem.”** Allow the students ample time to solve the problem by drawing, using manipulatives, writing equations, or responding orally.

After the student has solved the problem, ask the student to explain the strategy he or she used to solve the problem. Say, **“Tell me how you found your answer.”**

Sample Problems:

The student solves real world addition and subtraction story problems within 11-19. The student produces some evidence of a strategy (e.g., drawing, manipulatives, equation, or oral response) and when asked can explain the strategy used, e.g.,

- George has 15 cookies. He gives some to his friends at lunch. Now he has 8 cookies left. How many cookies did George give to his friends? (change unknown, subtraction)



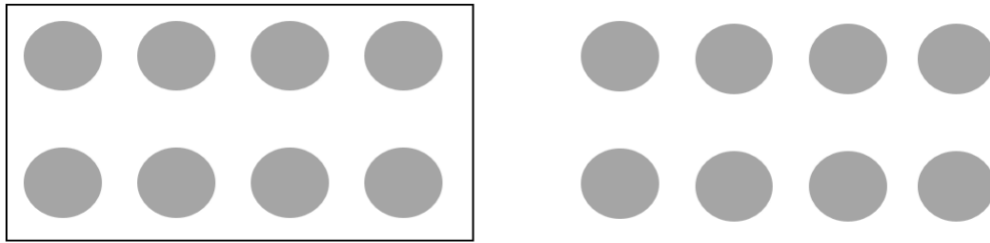
- Peter had some books. He gave Kim 12 books. He has 7 books left. How many books did Peter have to start with? (start unknown)



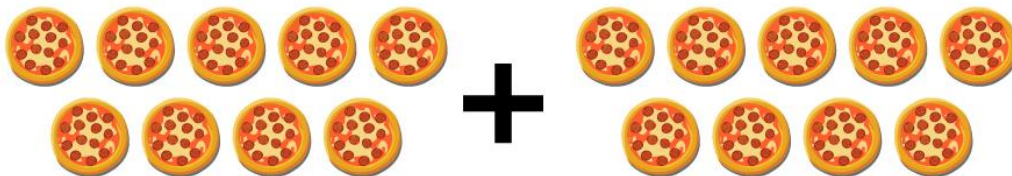
- Jamal made 17 pancakes for his family. Jamal's family ate 6 pancakes during breakfast. How many pancakes are left? (result known)



- There are 8 students on the playground. Then 8 more students show up. How many students are there now? (result unknown)



- There are 9 pizzas in the cafeteria. Mrs. Samson brings more pizzas. There are now 18 pizzas. How many more pizzas did Mrs. Samson bring? (change unknown)



If the student correctly solves addition and subtraction problems and explains the strategy used with at least 80% accuracy, the student is partially matched to the *Exceeding* stage of the progression.

ADSU-10

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none"> – Responds immediately and accurately, verbally or in writing, to addition and subtraction problems within 10. (MGSE1.OA.6b)
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Manipulatives or Materials:

- Addition and subtraction expressions within 10 (e.g., 5 addition and 5 subtraction expressions within 6 - 10). These could be printed on paper or presented digitally.
- Writing tools and paper

Note: Refer to the *Optional Resource Guide* for a copy of the Optional Recording Sheet with Sample Problems.

Performance Task Activity:

Have writing tools and paper available for the student to respond. Explain the activity to the student.

Say, **“I am going to show you addition and subtraction problems. Tell me the answer to each problem out loud. You can also write your answers.”** Show and read aloud each problem to the student and observe how long it takes them to say (or write) the answer.

Optional Recording Sheet with Sample Problems:

#	Addition	Student Response	#	Subtraction	Student Response
1	4 + 5		6	9 – 3	
2	7 + 3		7	10 – 5	
3	8 + 1		8	7 – 4	
4	6 + 2		9	8 - 2	
5	1 + 9		10	6 – 1	

If the student correctly responds verbally or in writing to determine the correct sum or difference within 3-5 seconds without resorting to counting strategies with at least 80% accuracy, the student is partially matched to the *Exceeding* stage of the progression. The student may write his or her answer.

ADSU-11

Learning Target(s): <i>Exceeding</i>	<ul style="list-style-type: none">– Recognize “a ten” as a bundle of ten ones, numbers from 11 to 19 as one ten and some leftover ones, and decade numbers 10 to 90 as a group of tens with no leftover ones. (MGSE1.NBT.2)
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Manipulatives or Materials:

Part A:

- Number cards 11 to 19
- 20 objects (e.g., counters, unifix cubes, counting bears, or other counting objects)
- Ten-frame

Part B:

- Cards of decade numbers 10 to 90
- Unifix cubes or place value (base 10) rods

Performance Task Activity:

Note: Teachers should use objects accessible in their classrooms. Underlined words represent the objects used. The underlined words should be replaced with the name of the objects used.

Part A:

Have ten frame and 20 objects available on the table for the student to use. Explain the task to the student. Say, “**Today, we are going to look at numbers and how they make tens and ones.** Demonstrate an example to the student to ensure he or she understands the directions. Show a number card 11 to 19. Say, “**How many groups of ten are in the number __? How many ones are in the number __?**” Show the student how to use the objects to help make a ten and some leftover ones. Say, “**You may use these objects to help you make __.**” Show the student by grouping ten objects and the leftover ones. Ask the student, “**Which one of these [point to the groups] is a ten?**” Student should recognize “a ten” as the bundle of ten ones.

Ensure the student understands the directions. Show the student number card, 12. Ask the student, “**How many groups of ten are in the number 12? How many ones are in the number 12?**”

The student should explain, “The number 12 has 1 ten and 2 ones.” The student can also show a bundle of ten ones with two leftover ones. Repeat this process with a range of several other numbers between 11 and 19.

Sample Problems:

- 12
- 14
- 17
- 19
- 13

If the student correctly recognizes “a ten” as the bundle of ten ones and recognizes numbers from 11 to 19 as one ten and some leftover ones with at least 80% accuracy, the student is partially matched to the *Exceeding* stage of the progression.

Part B:

Have unifix cubes or place value (base 10) rods available on the table for the student to use. Explain the task to the student. Say, “**Today, we are going to look at numbers and how they make tens and ones.**” Demonstrate an example to the student to ensure he or she understands the directions. Show a decade number card 10 to 90. Say, “**How many groups of ten are in the number ___? How many ones are in the number ___?**” Show the student how to use the objects to help make a ten and some leftover ones. Say, “**You may use these objects to help you make ___.**” Show the student by using ten rods and no leftover ones.

Ensure the student understands the directions. Show the student number card, 20. Ask the student, “**How many groups of ten are in the number 20? How many ones are in the number 20?**”

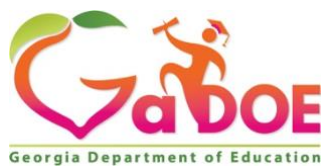
The student should explain, “The number 20 has 2 tens and no leftover ones.” The student can also show two bundles of ten ones or two ten rods. Repeat this process with a range of several other decade numbers between 10 and 90.

Sample Problems:

- 20
- 40
- 80
- 50

90

If the student correctly recognizes decade numbers 10 to 90 as a group of tens with no leftover ones with at least 80% accuracy, the student is partially matched to the *Exceeding* stage of the progression.



205 Jesse Hill Jr. Drive SE
Atlanta, GA 30334
www.gadoe.org



@georgiadeptofed

Richard Woods, State School Superintendent
Educating Georgia's Future