Curriculum Overview

Mathematics – Grade Kindergarten (Course #5012020)

Adopted Instructional Materials: *Houghton Mifflin Harcourt, Go Math!*

Big Idea 1 Numbers and Groups 0 to 9	Big Idea 2 Identifying Two-Dimensional Shapes	Big Idea 3 Comparing with Measurement & Numbers 0 - 10	Big Idea 4 Addition & Subtraction Within 10	Big Idea 5 Numbers 11 and Beyond	Big Idea 6 Two- and Three-Dimensional Shapes	Big Idea 7 Data	Big Idea 8 Mastery of Kindergarten
Chapters 1 & 3	Chapter 9 (Partial)	Chapters 2, 4, & 11	Chapters 5 & 6	Chapters 7 & 8	Chapters 9 (Partial) & 10	Chapter 12	Critical Areas

Quarter 1	Quarter 2	Quarter 3	Quarter 4

Big Ideas in red shading denote critical areas for kindergarten. An explanation of the critical areas is provided in the Mathematical Content Standards below.
Big Ideas in blue shading denote supporting areas for kindergarten. These Big Ideas are essential to future critical areas within and across grade levels.

Curriculum Notes: Kindergarten Course Description

- Mathematical Content Standards: In Kindergarten, instructional time should focus on two critical areas: (1) representing and comparing whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.
  - (1) Students use numbers, including written numerals to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5+2=7 and 7-2=5. Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.
  - (2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways, as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

- Standards for Mathematical Practice: The teacher's role in the development of students' proficiency of mathematical practice across all content standards is essential.
  - The teacher creates daily opportunities and establishes classroom norms that allow students to:
    - develop mathematical understanding from prior knowledge
    - build connections
    - foster each student's accountability to think, reason, and explain
  - Students must be shown how to apply the mathematical practices to new content.
  - It is through dialogue and discussion of different strategies that students become knowledgeable, independent learners.
  - While the Standards for Mathematical Practice are woven throughout mathematics instruction, the Kindergarten Academic Plan indicates the focused Standards for Mathematical Practice for each Big Idea of instruction.
  - Mathematical Practice Resources: Implementing Math Practices, Mathematical Practices Progression, Mathematical Practice Question Stems
  - Additional Resource: Achieve the Core Go Math Guidance Documents **Please use as additional support and guidance keeping in mind this does not address Florida's amended standards. Please use your MAFS when using this resource.**

Updated: July 24, 2017

Big Idea 1
Quarter 1

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)
Kindergarten Math CCE Blueprint

Suggested Big Idea Length:
24 – 28 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Numbers and Groups 0 to 9*
Big Idea 1 focuses on developing students' ability to count with meaning from 0 to 9; full mastery of each standard will be obtained during future Big Ideas. Big Idea 1 is meant to develop a deep relationship between numbers and quantities. Using the Mathematical Practices stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of numerals, number words, number value, conservation of numbers, and sequence.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 1. View the attached document, K Big Idea 1 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 1.

- Bodily Kinesthetic
- Classroom Objects
- Connecting Cubes
- Dominoes
- Five Frames
- Grid Paper (10x5)
- Number Cubes
- Number Tiles
- Numeral Cards
- Playing Cards
- Sand or Salt
- Ten Frames
- Two-Color Counters

Teacher Note:
Additional days have been included in Big Idea 1 to foster development of classroom routines and procedures to create an environment of collaboration and community.

Begin your math journals on day one; students should have math journal writing daily/weekly. Students should keep a math journal for daily/weekly problems that encourage students to justify their thinking, illustrate new math vocabulary, and/or can identify a specific concept in the real-world.

It is recommended for kindergarten to have calendar math time to build students' understanding of days of the week and months of the year; mastery of this Social Studies standard is to be achieved by the end of kindergarten. Use the following link, Calendar Skills and Sample Script, for an outline of skills that may be discussed during calendar time and a sample script.

Although composing and decomposing a number is not a standard assessed during Big Idea 1, it is a very important perquisite skill that will be assessed during Big Idea 4, Addition and Subtraction. Begin to work with kindergarten students on what it means to compose and decompose a number.

Standards

Math Content Standards	Cross Content Standards
MAFS.K.CC.1.1: Count to 100 by ones and by tens. **MAFS.K.CC.1.2:** Count forward beginning from a given number within the known sequence (instead of having to begin at 1). **MAFS.K.CC.1.3:** Read and write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **MAFS.K.CC.2.4:** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger. **MAFS.K.CC.2.5:** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	**SS.K.A.3.2:** Explain that calendars represent days of the week and months of the year. **SS.K.A.3.1:** Use words and phrases related to chronology and time to explain how things change and to sequentially order events that have occurred in school. **LAFS.K.RF.1.1:** Demonstrate understanding of the organization and basic features of print. a. Follow words from left to right, top to bottom, and page by page. **LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. **Suggested Standards for Mathematical Practice** **MAFS.K12.MP.3.1:** Construct viable arguments and critique the reasoning of others. • How do you know that you have 4? How do you see 4? • How can you prove your answer? • What do you think about what _____ said? • How many would we have if we added one more to our set? **MAFS.K12.MP.5.1:** Use appropriate tools strategically. • What math tool could we use to solve this problem? • How do we keep track of the objects we have counted and the ones we haven't counted yet?

Big Idea(s)

Numbers and Groups 0 to 9

Essential Outcome Question(s)

How can you show, count, write and compare numbers 0 to 5?

Conceptual Understandings	Essential Question(s)
• Number names and written numbers are used to count and tell how many were counted. • When we count objects, the last number we say tells how many objects there are in all. • When we count, each number we say means there is one more object we have counted.	• How can you show and count 0 to 9 with objects? • How can you count and write 0 to 9 with words and numbers? • How can you use two sets of objects to show numbers 0 to 5 in more than one way? • How do you know that numbers get larger by one as you count and make groups of objects? • How can you make a model to solve problems? • Why do you use models to solve problems?

Aligned Learning Goals		District Adopted Materials	Supplemental Resources	Strategies for Differentiation
Count and Identify Number 0-5 13 content + 1 progress monitoring check	Verbally count to 5 by ones *(CC.2.4)*	Go Math! Chapter 1 Achieve the Core Go Math Guidance Documents	• Math Sticks • Illuminations: Focus on Two • Illuminations: Three in a Set • Illuminations: Here's a Handful • Which set has one more?	Reteach & Enrichment Support: Count and Identify Numbers 0-5 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Count on from any given number to 5 *(CC.1.2)*			
	Read and write numbers 0 to 5 *(CC.1.3)*			
	Represent each number 0 to 5 using objects or drawings *(CC.1.3)*			
	Write the numeral for sets of objects to 5 *(CC.1.3)*			
	Count sets of 0 to 5 by touching each object while saying the name, in an organized pattern (line or circle) or scattered configuration *(CC.2.4, CC.2.5)*			
	Count sets 0 to 4, add one object and tell how many (without recounting) *(CC.2.4, CC.2.5)*			

Instructional Strategies and Resources

Early number knowledge includes four related aspects:

- recognizing and naming how many items in a small configuration
- learning names and eventually ordering a list of number words to ten and beyond
- saying number words in correspondence with objects
- understanding that the last number word said when counting refers to how many items have been counted

Counting and Cardinality:

- Mathematical concepts should be taught directionally, as in writing and reading (from left to right, top to bottom).
- Refers to the idea that a number word said tells you the quantity you have, and the number you end on when counting represents the entire amount counted.
- Rote counting is an important step in development; however, it is not the focus of this big idea. A deeper grasp of the concepts needs to be demonstrated for the skills in this area.
- Encourage students to explain their reasoning by asking probing questions such as, "How do you know?" Frequent and brief opportunities utilizing 'counting on' and 'counting back' are recommended. A common misconception is that students do not see "zero" as a number. Ask students to write 0 and say "zero" to represent the number of items left when all items have been taken away. Avoid using the word "none" to represent this situation. When zero is placed with other numbers later (as in 10, 20, etc.), zero has a value, and the definition of "none" may create confusion.

Subitizing:

- Ability to recognize the size of a group quickly.
- Dot cards, ten frames, dominos, and other visual number patterns should be used to support students' development of this ability.
- View the following article on subitizing, "Subitizing: What is It? Why Teach It?" by Douglas H. Clements, 1999: *Teaching Children Mathematics*, NCTM.

Children's Literature:

- *Ten Black Dots* by Donald Crews
- *Five Little Ducks* by Penny Ives
- *How Do Dinosaurs Count to Ten?* by Jane Yolen

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:

- Chapter 1 Mid-Chapter Checkpoint
- Chapter 1 Performance Task
- Math Journal Entries
- Quiz, Quiz Trade

MFAS Task K.CC.2.5:

- How Many Dots? (Only using 0 to 5)

Count and Identify Numbers 0-9 11 content + 1 progress	Verbally count to 9 by ones *(CC.2.4)* Count on from any given number to 9 *(CC.1.2)* Read and write numbers 0 to 9 *(CC.1.3)* Represent each number 0 to 9 using objects or drawings *(CC.1.3)*	Go Math! Chapter 3 Achieve the Core Go Math Guidance Documents	• Task Card: Ladybugs • Math Sticks • Illuminations: How Many Letters Are in Your Name?	Reteach & Enrichment Support: Count and Identify Numbers 0-9 The above documents provides opportunities for reteach and enrichment with the current aligned learning goal.

	Write the numeral for sets of objects to 9 *(CC.1.3)*			
	Count sets of 0 to 9 by touching each object while saying the name, in an organized pattern (line or circle) or scattered configuration *(CC.2.4, CC.2.5)*			
	Count sets 0 to 9, add one object and tell how many (without recounting) *(CC.2.4, CC.2.5)*			

Instructional Strategies and Resources

Students build on the rich foundation of number sense they developed to begin learning the count sequence.

To count successfully students must be able to:

- apply the rote counting sequence
- assign one counting number to each object counted
- develop strategies for keeping track of what has already been counted.

Students also develop the idea of conservation of set which means that they maintain the count of a set even when objects are rearranged or moved. The counting sequence itself is a rote procedure and must be attached to the number sense students explored in Big Idea 1.

In Big Idea 1, students began developing the ability to subitize or, to quickly “see” numbers without counting them one-by-one or touching them. Students build on this foundation in subitizing to begin seeing numbers from 5-9 as both a “whole” and as two groups of smaller numbers. Dominoes are great tools for helping students learn how to do this. This is the first step in the composing and decomposing of numbers students will explore in Big Idea 3.

Children’s Literature:

- *Ten Black Dots* by Donald Crews
- *The Very Hungry Caterpillar* by Eric Carle
- *Rooster’s Off to See the World* by Eric Carle
- *The Enormous Watermelon* by Brenda Parkes

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.
The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction. *Resources:* • Chapter 3 Mid-Chapter Checkpoint • Chapter 3 Performance Task • Math Journal Entries *MFAS Tasks K.CC.2.4:* • How Many Dots Are There? • Books and Bookmarks
Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint • Numbers 0 – 5; Teacher Guidelines • Numbers 0 – 9; Teacher Guidelines

Big Idea 2
Quarter 1

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
13 – 17 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Identifying Two-Dimensional Shapes*
Two Dimensional Shapes focuses on developing students' ability to identify and describe two dimensional shapes. Students then begin to recognize common attributes in two dimensional shapes. Using the **Mathematical Practices** stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of the attributes of two dimensional shapes.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 2. View the attached document, K Big Idea 2 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 2.

- Bodily Kinesthetic
- Classroom Objects
- Dot Paper
- Paper Two-Dimensional objects
- Pattern Blocks

Teacher Note:
Building and composing shapes will be assessed during Big Idea 6 in the 4th Quarter.

Standards

Math Content Standards	Cross Content Standards
MAFS.K.G.1.2: Correctly name shapes regardless of their orientations or overall size. **MAFS.K.G.2.4:** Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **MAFS.K.G.2.5:** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic **SC.K.P.8.1:** Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.

<table>
<tr><td colspan="4"></td><td colspan="2">Suggested Standards for Mathematical Practice
MAFS.K12.MP.7.1:
Look for and make use of structure.
• Describe how a triangle is like a square. Describe how they differ.
• How are a triangle and a circle alike? How are they different?
• What two-dimensional shape is curved?
• Which shapes have no curves?</td></tr>
<tr><th colspan="6">Big Idea(s)</th></tr>
<tr><td colspan="6">Two Dimensional Shapes</td></tr>
<tr><th colspan="6">Essential Outcome Question(s)</th></tr>
<tr><td colspan="6">How can you identify, name and describe two dimensional shapes?</td></tr>
<tr><th colspan="3">Conceptual Understandings</th><th colspan="3">Essential Question(s)</th></tr>
<tr><td colspan="3">• Shapes can be identified by their attributes.
• Two dimensional shapes are “flat” or lie in a plane.</td><td colspan="3">• How can you describe two dimensional shapes?
• How can you compare two dimensional shapes?</td></tr>
<tr><th colspan="2">Aligned Learning Goals</th><th>District Adopted Materials</th><th colspan="2">Supplemental Resources</th><th>Strategies for Differentiation</th></tr>
<tr><td rowspan="2">Identifying
Two-Dimensional Shapes
14 content + 1 progress</td><td>Verbally name and identify two-dimensional shapes
(G.1.2)</td><td rowspan="2">Go Math!
Chapter 9

Achieve the Core Go Math Guidance Documents</td><td colspan="2" rowspan="2">• Illuminations: Buttons! Buttons!
• CPALMS: Shape Hunt</td><td rowspan="2">Reteach & Enrichment Support: Identifying Two-Dimensional Shapes

The above document provides opportunities for reteach and enrichment with the current aligned learning goal.</td></tr>
<tr><td>Verbally describe two-dimensional shapes by different attributes
(G.2.4)</td></tr>
<tr><th colspan="6">Instructional Strategies and Resources</th></tr>
<tr><td colspan="6">During this time of instruction children will be exposed to two-dimensional shapes and will begin to develop their spatial sense. Students will be asked to identify, create, compose, compare and analyze shapes based on attributes. It is important to allow students to use ‘accessible vocabulary’, then be introduced to ‘formal vocabulary’ as it relates to shapes. i.e. Children may describe a square as having four points, the teacher will introduce the term vertex and model using the term ‘vertex’ that will eventually replace the term ‘points’.

“…learning the characteristic properties of a geometrical shape is essential because the can for the basis of higher levels of thinking and help in gaining a practical and intuitive grasp of the mathematics of space.” (Triadafillidis, 1995, p.225) With this in mind it is important for students to be able to talk about and describe shapes using the properties of the shapes (number of sides, number of vertices,)</td></tr>
</table>

Allow ample instructional time for students to model with mathematics by using a variety of hands on activities. i.e. Children collect and sort items that represent a triangle, square, rectangle, hexagon and circle. Ask students "How do you know which one is a triangle?" Children begin by identifying shapes seen in the environment, then progress to identifying shapes by their specific attributes.

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:

- Chapter 9 Mid-Chapter Checkpoint
- Chapter 9 Test Review and Performance Task
- Math Journal Entries

MFAS Tasks K.G.1.2:

- Identify the Shapes
- Is it Still a Triangle?

MFAS Tasks K.G.2.4:

- How Are These Shapes Alike?
- Compare Hexagons
- Compare Rectangles and Triangles

Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint

- Identifying 2D Shapes; Teacher Guidelines
- Math Skills Q1 (One-on-One)
    - Conservation to 10

Big Idea 3
Quarters 1 & 2

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
24 – 28 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Comparing with Measurement and Numbers to 10*

Big Idea 3, focuses on comparing numerals and sets of objects to 10 using greater than, less than, and same as. In this Big Idea students will also compare objects by height, length and weight using taller/shorter, longer/shorter, and heavier/lighter. During measurement students will measure objects using nonstandard units and also begin measuring from end to end. Using the Mathematical Practices stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of numerals, number words, number value, conservation of numbers, sequence of numbers, and comparison of numbers. Instruction should give the students opportunities to reason about the mathematics and justify their thinking.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 3. View the attached document, K Big Idea 3 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 3.

- Bodily Kinesthetic
- Classroom Objects
- Connecting Cubes
- Number Tiles
- Numeral Cards
- Ten Frames
- Two-Color Counters

Teacher Note:

During this time, teachers should begin introducing data collections, displaying data on a graph and reading a graph to front load for standards assessed in Big Idea 7. Data can continually be revisited when appropriate and include themed units. Example: Valentines conversation hearts during February, Lucky Charms during March, etc.

Standards

Math Content Standards	Cross Content Standards
MAFS.K.CC.1.3: Read and write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **MAFS.K.CC.2.4:** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. **SC.K.N.1.5:**

MAFS.K.CC.3.6:
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

MAFS.K.CC.3.7:
Compare two numbers between 1 and 10 presented as written numerals.

MAFS.K.MD.1.1:
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

MAFS.K.MD.1.a:
Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

MAFS.K.MD.1.2:
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter*

Recognize that learning can come from careful observation.

Suggested Standards for Mathematical Practice

MAFS.K.MP.2.1:
Reason abstractly and quantitatively
- How can you use square tiles to measure the length of the object?

MAFS.K12.MP.3.1:
Construct viable arguments and critique the reasoning of others.
- How do you know that you have 8?
- How do you see 8?
- How can you prove your answer?
- What do you think about what _____ said?
- How many would we have if we added one more to our set?

MAFS.K12.MP.5.1:
Use appropriate tools strategically.
- What math tool could we use to solve this problem?
- How do we keep track of the objects we have counted and the ones we haven't counted yet?

MAFS.K12.MP.6.1:
Attend to precision.
- How would you explain to a classmate the best way to count objects?
- How do you know when to use matching to compare sets of objects?
- What does it mean when two sets have the same number of objects?
- How can you measure the weight of an object?
- How can you use the words 'same length' in your answer?

MAFS.K12.MP.7.1:
Look for and make use of structure.
- What can you tell me about how we count?
- Do we always count the same way?
- What patterns do we see on this dot card?
- What other patterns do you notice?

Big Idea(s)

Comparing with Measurement and Numbers to 10

Essential Outcome Question(s)

How can you compare numbers 0 to 10?
How can you compare objects based upon their height, length, or weight?

Conceptual Understandings	Essential Question(s)
• Number names and written numbers are used to count and tell how many were counted.	• How can you make a model to solve problems? • Why do you use models to solve problems?

• When we count objects, the last number we say tells how many objects there are in all. • When we count, each number we say means there is one more object we have counted. • We use what we know about counting to answer questions about greater than, less than, and/or equal to. • Length, height, and weight are some attributes of objects. • Length and height can be measured using nonstandard units. • Direct comparison can be used to determine if an object is shorter than, longer than, or the same size as another object.	• How can you use matching and counting to compare sets with the same number of objects? • How can you compare sets when the number of objects in one set is greater than or less than another set? • What numbers are greater than or less than a given number? • What can you use to compare the weights of two objects? • What models can you use to show ways to measure one object? • How can you use nonstandard units to measure an object?

Aligned Learning Goals		District Adopted Materials	Supplemental Resources	Strategies for Differentiation
Compare Numbers 0 to 5 7 content + 1 progress monitoring check	Compare two groups of objects (up to 5) and state which group is greater than, less than or equal to *(CC.2.4, CC.3.6)*	Go Math! Chapter 2 Achieve the Core Go Math Guidance Documents	• Task Card: Mathopolis • Task Card: Greater Gator	Reteach & Enrichment Support: Compare Numbers 0-5 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Compare two numerals between 0 to 5 and state which numeral is greater than or less than *(CC.2.4, CC.3.7)*			

Instructional Strategies and Resources

The learning progression in this big idea begins to move students from comparison by matching strategies to comparison by matching and counting strategies. Students explore these ideas with small numbers and build on this exploration in Big Idea 2 with larger numbers. Organization of manipulatives is key for students to learn how to compare two sets using matching strategies and to connect this to one-to-one correspondence. By aligning manipulatives, like counters, students can make comparisons without counting. It is also important that number line representations are used when discussing comparisons of numbers. Students should be continuously asked to justify how they know one number is greater than, less than, or equal to another number. "How do you know 4 is greater than 2?" "Can you show me how you know this group of 3 objects is equal to this other group of objects?" Here are some ways students could justify their thinking for the learning targets in this unit concept. Students will use a combination of matching and counting strategies to justify their thinking.

Children must connect counting to symbols and to accurate representations. They learn to communicate their mathematical knowledge by translating around various representations for numbers; this includes, but isn't limited to:

- Matching objects to numbers orally as they count (one-to-one correspondence).
- Recognizing the symbol that corresponds to a number (accurate symbolic form).
- Describing a result numerically in oral and written form (translate among representations).

- Solving problems that deal with comparison.
- Explaining the process and answer accurately, with appropriate precision.

Greater, Lesser, Same Display Cards – these can be used to help build student vocabulary with mathematical symbols.

Children's Literature:

- *More or Less* by Stuart Murphy

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:

- Chapter 2 Mid-Chapter Checkpoint
- Chapter 2 Performance Task
- Math Journal Entries
- Quiz, Quiz Trade

Compare Numbers 0 to 10 9 content + 1 progress monitoring check	Compare two groups of objects (up to 10) and state which group is greater than, less than or equal to *(CC.2.4, CC.3.6)* Compare two numerals between 6 to 10 and state which numeral is greater than or less than *(CC.2.4, CC.3.7)*	Go Math! Chapter 4 Achieve the Core Go Math Guidance Documents	• SMART Lesson: Comparing Objects • Assessment: Take and Compare	Reteach & Enrichment Support: Compare Numbers 0-10 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.

Instructional Strategies and Resources

The learning progression in this aligned learning goal builds on the foundation of comparing numbers in Big Idea 1. In this Big Idea, students should move towards matching and counting to compare numbers.

Teachers should make an effort to:

- Explicitly link counting and comparison
  - use vocabulary of greater than, less than, and equal to

Student should:

- Use matching to see if there are left overs
- Count sets to determine which is larger
- Understand that even if a group looks larger (because of size) use what they know about numbers to determine greater than, less than, and/or equal to

- Justify their decisions about set comparisons using one-to-one correspondence and counting
- Explain their thinking using more precise vocabulary: greater than/more than; less than/fewer/than; equal to/same number; compare/alike & different; match; set – vocabulary will continue to build throughout all Big Ideas. During this instructional time, students should be required to explain their thinking using language similar to Student 2's response.

Student 1	Student 2	Student 3
I lined up one square and one triangle. Since there is one extra triangle, there are more triangles than squares.	I counted the squares and I got 8. Then I counted the triangles and got 9. Since 9 is bigger than 8, there are more triangles than squares.	I put them in a pile. I then took away object. 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.

Children's Literature:
Ten Apples Up On Top by Dr. Seuss

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:
- Chapter 4 Mid-Chapter Checkpoint
- Chapter 4 Performance Task
- Math Journal Entries
- Calendar Math – Days of the Week

MFAS Tasks K.CC.3.6:
- Who Has More Dots?
- Greater Than/Less Than/Equal To
- Which Side Has More?

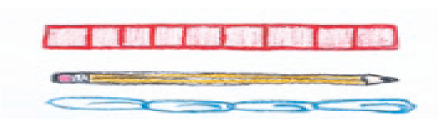
MFAS Tasks K.CC.3.7:
- Which Is Greater

Measurement 7 content + 1 progress monitoring check	Use direct comparison to measure and draw the lengths of two objects *(MD.1.2)*	Go Math! Chapter 11 Achieve the Core Go Math Guidance Documents MFAS Teaching Support Lesson 11.3A	• Illuminations: Grandma's Button Box • CPALMS: Candy Math • CPALMS: The Long and Short of Candy	Reteach & Enrichment Support: Measurement The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Use direct comparison to measure and draw the heights of two objects *(MD.1.2)*			
	Use direct comparison of two objects to determine which is heavier *(MD.1.2)*			
	Describe different ways to measure an object *(MD.1.1)*			
	Express the length of an object using nonstandard units *(MD.1.a)*			

Instructional Strategies and Resources

During this time, children will learn to distinguish and compare measureable attributes of objects. It is important to guide conversations regarding bigger or smaller, taller or shorter, and longer or shorter. Students will conclude that objects can have more than one measureable attribute. Children may distinguish length, height and extend to area or volume. When children relate the greater number of cubes to the longer length they are making use of structure and the visualization of the greater number being longer will help students to measure using formal units.

They will measure objects using non-standard objects such as paper clips, square tiles, or connecting cubes. Give students many opportunities to physically measure and compare objects.



When instruction begins for measurement of weight, allow students to hold a heavier object in one hand and a lighter object in the other hand in order to compare them. Asking students to order objects from lightest to heaviest will help build understanding of measuring weight.

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:

- Chapter 11 Mid-Chapter Checkpoint Assessment
- Math Journals

MFAS Tasks K.MD.1.1:

- Measurable Attributes of a Paper Clip
- Measurable Attributes of an Elephant
- Describing the Lengths of Pencils
- Attributes of a Car

MFAS Tasks K.MD.1.1a:

- Measure With Colored Tiles
- Measure With Paper Clips
- Measuring the Width and Height of a Book
- Using Tiles to Measure
- Using Paper Clips to Measure

MFAS Tasks K.MD.1.2

- Compare Lengths of Cubes
- Compare Two Bags
- Taller or Shorter
- Comparing Lengths
- Longer Than

Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint

- Comparing Numbers 0 – 5; Teacher Guidelines
- Comparing Numbers 0 – 10; Teacher Guidelines
- Measurement; Teacher Guidelines

Big Idea 4
Quarters 2 & 3

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
37 – 41 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Addition and Subtraction Within 10*
Addition focuses on developing students' ability to understand the putting together and adding to concepts. It is meant to develop a deep understanding of the idea of joining groups, finding different ways to make numbers to 10 and finding missing numbers in a number sentence. Subtraction focuses on developing students' ability to understand the taking apart and subtracting to concept. It is meant to develop a deep understanding of the idea of taking groups apart, finding different ways to make numbers to 10 and finding missing numbers in a number sentence.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 4. View the attached document, K Big Idea 4 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 4.

- Bodily Kinesthetic
- Clothespins
- Connecting Cubes
- Number Cubes
- Playing Cards
- Two-Color Counters

Teacher Note:
Additional instructional days has been included during this Big Idea to provide multiple opportunities for hands-on practice with composing and decomposing numbers using a variety of manipulatives.

Subtraction within 10 will be assessed in Q3.

Standards	
Math Content Standards	Cross Content Standards
MAFS.K.OA.1.1: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. **MAFS.K.OA.1.a:** Use addition and subtraction within 10 to solve word problems involving both addends unknown, e.g., by using objects, drawings, and equations with symbols for the unknown numbers to represent the problem. (Students are not required to independently read the word problems.) **MAFS.K.OA.1.2:** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.2:** Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

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MAFS.K.OA.1.4:
For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

MAFS.K.OA.1.5:
Fluently add and subtract within 5.

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LAFS.K.W.1.2:
Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

Suggested Standards for Mathematical Practice

MAFS.K12.MP.1.1:
Make sense of problems and persevere in solving them.

- How can we solve this problem?
- How can you use counters/cubes to show me what is happening in the problem?
- How could acting out this problem help us decide how to solve?
- Does your answer make sense?

MAFS.K12.MP.2.1:
Reason abstractly and quantitatively.

- Why did you choose to add to solve this problem?
- How could we use cubes and drawings to help us solve this word problem?
- How does your picture show what is happening in the problem?
- Do you always have to add things that are alike?
- How does the number sentence we wrote show what is happening in the problem I read to you?

MAFS.K12.MP.4.1:
Model with mathematics.

- How does our number sentence represent this problem?
- How can you use objects and drawings to solve addition word problems?

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<tr><th colspan="2">Big Idea(s)</th></tr>
<tr><td colspan="2">Addition and Subtraction Within 10</td></tr>
<tr><th colspan="2">Essential Outcome Question(s)</th></tr>
<tr><td colspan="2">How can you show addition?
How can you show subtraction?</td></tr>
<tr><th>Conceptual Understandings</th><th>Essential Question(s)</th></tr>
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- Numbers can be taken apart and put together in more than one way.
- Math can be used to represent and solve real-world problems.
- Numbers can be represented as groups of smaller numbers.

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- How can you show addition as adding to?
- How can you show addition as putting together?
- How can you solve problems using the strategy act it out?
- How can you use objects and drawing to solve addition word problems?
- Why do you use the plus and equal sign?
- How can you use a drawing to find the number that makes a 10 from a given number?

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	• How can you solve addition word problems and complete the addition sentence? • What information from a number story is needed to solve the problem? • What model could you use to represent an addition sentence for number pairs for sums to 5, 6, 7, 8, 9, 10? • How can you show subtraction as subtracting from? • How can you show subtraction as taking apart? • How can you use objects and drawing to solve subtraction word problems? • How can you solve subtraction word problems and complete the subtraction sentence? • Which set has one fewer? • Why do you use the minus and equal sign? • How are addition and subtraction sentences related?

Aligned Learning Goals		**District Adopted Materials**	**Supplemental Resources**	**Strategies for Differentiation**
Addition Within10 20 content + 1 progress monitoring check	Matches the addition sentence to the objects *(OA.1.1)*	Go Math! Chapter 5 Achieve the Core Go Math Guidance Documents	• Math Sticks • Task Card: Counting Bears • Task Card: My Addition Plate • CPALMS: How Many Goldfish? • Math Solutions: Five Little Speckled Frogs	Reteach & Enrichment Support: Addition Within 10 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Completes the addition sentences *(OA.1.2)*			
	From any number from 1-9 find the number to make 10 *(OA.1.4)*			
	Begin to add facts to the sum of 5 with fluency (Mastery should be met by End of Year) *(OA.1.5)*			
	Represent addition using objects or drawings *(OA.1.1)*			
	Solve addition word problems within 10 using objects or drawings, including both addends unknown *(OA.1.2, OA.1.a)*			
	Show different ways to make numbers to 10 in two groups *(OA.1.4)*			

Instructional Strategies and Resources

Children's initial explorations of addition should always be in a problem solving context. This is how their understanding of what it means to add is developed. They are beginning to learn that how a problem is solved depends on the context of the problems themselves.

- Students begin their exploration of addition through problem solving situations that require joining action.
  - Addition problems can be modeled with cube trains of two different colors.
  - When students use manipulatives to model addition problems, they should always be recording their work with both symbols and words so that the concrete, representational, and abstract models are all included.
  - It is important to present students with addition problem contexts that are easily modeled with objects (ex: *Morgan had three pencils. Her friend Evan gave her two more pencils. How many pencils does Morgan have now?"*); and problem contexts which cannot be physically joined (*ex: "At our school there are 2 oak trees in the front and 3 oak trees in the back. How many oak trees are there at our school?"*).

One important opportunity to explore number patterns is in the pattern of 5+n. This pattern is important to spend some time on as it plays an important role in building fluency in addition and subtraction later.

5 + n pattern				
6 = 5 + 1	7 = 5 + 2	8 = 5 + 3	9 = 5 + 4	10 = 5 + 5
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The concept of composition and decomposition of numbers is related to addition.

- As children learned the numbers 0-10, they should have explored the many ways to "make" each of these numbers.
- Initial explorations are built upon as children use ten frames to model one possible decomposition of the number 7 as 6 and 1. They now learn that this idea can be represented using math symbols in an equation: 7=6+1.
  - The number 7 can be represented as 6 joined with 1 more. In addition, students are expected to realize that a set of objects (7) can be decomposed in multiple ways (2 and 5, 3 and 4, etc.…)

It is important to note that the focus of addition instruction in kindergarten is on developing **conceptual understanding** rather than on reading and solving addition number sentences (equations.) This is why kindergarteners should engage in numerous experiences using joining vocabulary prior to being introduced to the symbol +.

- Have a meaning to attach to the symbol.
- Prior to introduction of the symbols + and =, a joining situation could be read in this way: "*Three and two is the same amount as 5."*
- As students are gradually introduced to math equations, model the meaning of equality by using the words *is equal* or *is the same amount as* in an equation.
  - So, we say, "seven *is equal to/is the same amount as* six plus one" as we read the equation 7=6+1. Students who don't have a clear understanding of equality will say that the equation 2+4=1+5 is untrue. They only view the equal sign as a "do something" symbol. If we have taught the meaning of equality beginning in kindergarten, they now read this equation as true because they say to themselves, "two plus four *is the same amount as* one plus five." Recording composition and decomposition of numbers with equations is not required until first grade. In teacher-directed activities, present commuted pairs one after the other to encourage students to begin thinking about the commutative property of addition. (5+3=8 then 3+5=8)

Students are expected to be able to demonstrate fluency with addition of numbers within 5. Fluency in addition has a broad definition that does not only refer to memorization of basic addition facts. **Fluency in addition refers to knowledge of procedures, knowledge of when and how to use them appropriately, and skill in performing them flexibly, accurately and efficiently.**

Kindergarteners demonstrate fluency by adding numbers within 5 in two different problem contexts: Add To, Put Together: Total Unknown, and Put Together: Both Addends Unknown.

- *Add to: 4 bunnies sat on the grass. 1 more bunny hopped there. How many bunnies are on the grass now? 4+1=?*
- *Put Together: Total Unknown: 3 red apples and 2 green apples are on the table. How many apples are on the table? 3+2=?*
- *Put Together: Both Addends Unknown: Grandma has 5 flowers. How many can she put in her red vase and how many in her blue vase? 5=x+x*

Students develop fluency by understanding and internalizing the relationships between and among numbers. Oftentimes, when children think of each "fact" as an individual item that does not relate to any other "fact," they are attempting to memorize separate bits of information that can be easily forgotten. Instead, in order to fluently add, children must first be able to decompose a number to see its sub-parts. Once they have reached this milestone, children need repeated experiences with many different types of concrete materials over an extended amount of time in order to develop fluency in addition.

Children's Literature:

- *Five Little Monkeys* (Series) by Eileen Christelow
- *Ten Black Dots* by Donald Crews
- *Ten Flashing Lightning Bugs* by Philemon Sturges
- *Five Little Speckled Frogs* by Nikki Smith
- *Over in the Meadow* Counting Rhyme by Olive A. Wadsworth

Professional References:

- Quick Images: Visualizing Number Combinations Classroom Video Clip with Teacher Reflection from Teaching Channel

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.
The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:	*MFAS Task K.OA.1.1:*	*MFAS Tasks K.OA.1.2:*	*MFAS Tasks K.OA.1.4:*	*MFAS Tasks K.OA.1.5:*
• Chapter 5 Mid-Chapter Checkpoint • Chapter 5 Test Review and Performance Task • Chapter 5 Diagnostic Interview Assessment • Math Journal Entries	• Writing Center	• More Fun With Numbers • Bowl of Apples • Two Tables • Lizards on a Rock	• Making Ten • Draw Rectangles to Make Ten • Bags of Apples	• Fluency Within Five-Addition Only

Aligned Learning Goals		District Adopted Materials	Supplemental Resources	Strategies for Differentiation
Subtraction Within 10 17 content + 1 progress monitoring check	Represent subtraction using objects or drawings *(OA.1.1)*	Go Math! Chapter 6 Achieve the Core Go Math Guidance Documents	• Math Sticks • Illuminations: Finding Fact Families • Illuminations: Take Away • Illumination: Lost Buttons	Reteach & Enrichment Support: Subtraction Within 10 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Completes the subtraction sentences *(OA.1.2)*			
	Solve subtraction word problems within 10 using objects or drawings, including both unknowns *(OA.1.2, OA.1.a)*			
	Begin to subtract facts within 5 with fluency (Mastery should be met by End of Year) *(OA.1.5)*			
	Know that addition and subtraction sentences are related *(OA.1.2)*			

Instructional Strategies and Resources

The focus of this Big Idea is on developing a conceptual understanding of subtraction, not on reading and solving subtraction number sentences (equations.) It is important for kindergarteners to model and solve a variety of contexts that support subtraction situations. This is how they begin to make sense of situations in which subtraction is appropriate.

Kindergarteners should explore three different structures of subtraction situations:

- Result unknown: *Five puppies were playing in a basket. Three of the puppies jumped out. How many puppies are in the basket now? 5-3=?*
- Change unknown: *Five puppies were playing in a basket. Some puppies jumped out. Then there were two puppies playing in the basket. How many puppies jumped out? 5-?=2*
- Start unknown: *Some puppies were playing in a basket. Three puppies jumped out. Then there were two puppies playing in the basket. How many puppies were playing in the basket at the start? ?-3=2*

Students do not need to know the names of these subtraction structures. Teachers should recognize the types of subtraction contexts to ensure they are teaching their students that there are many different types of problems for which subtraction is the operation used to find the solution.

As students explore these subtraction contexts, they use:

- Objects
- Fingers
- Drawings
- Sounds
- Acting out situations

Since all subtraction situations do not represent "taking away," students should be taught the term *minus* so that they are not always equating subtraction with *take away*.

Students also explore the inverse relationship between addition and subtraction. This is a very important concept for students to begin developing as it leads to the discovery of related facts in first grade. Students should use concrete models (such as cube trains of two different colors) to explore this inverse relationship.

Students are expected to be able to demonstrate fluency with subtraction of numbers within 5. Fluency in subtraction has a broad definition that does not only refer to memorization of basic addition facts. **Fluency in subtraction refers to knowledge of procedures, knowledge of when and how to use them appropriately, and skill in performing them flexibly, accurately and efficiently.** Students develop fluency by understanding and internalizing the relationships between and among numbers. Often, when children think of each "fact" as an individual item that does not relate to any other "fact," they are attempting to memorize separate bits of information that can be easily forgotten. Instead, in order to fluently add, children must first be able to decompose a number to see its sub-parts. Once they have reached this milestone, children need repeated experiences with many different types of concrete materials over an extended amount of time in order to develop fluency in subtraction.

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:

- Chapter 6 Mid-Chapter Checkpoint
- Chapter 6 Test Review and Performance Task
- Math Journal Entries

MFAS Tasks K.OA.1.1:

- Writing an Equation
- Modeling Addition and Subtraction
- Carly's Sleepover Party

MFAS Task K.OA.1.2:

- Cats and Dogs Word Problem

MFAS Tasks K.OA.1.5:

- Fluency Within Five
- Fluency Within Five- Plus Ones and Minus Ones
- Fluency Within Five- Subtraction Only

Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint

- Addition Within 10; Teacher Guidelines
- Math Skills Q2 (One-on-One)
  - Addition Fluency 0 – 3
- Subtraction Within 10; Teacher Guidelines

Big Idea 5
Quarters 3 & 4

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
27 – 31 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Numbers 11 and Beyond*
Numbers 11 and beyond to 100 focuses on developing students' ability to count with meaning from o to 100. It is meant to develop a deep relationship between numbers and quantities. Using the **Mathematical Practices** stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of numerals, conservation of numbers, and sequence of numbers.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 5. View the attached document, K Big Idea 5 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 5.

- Beads
- Fifty Chart/ Hundred Chart
- Bodily Kinesthetic
- Two-Color Counters
- Connecting Cubes

Teacher Note:
It is recommended to continue working with graphs to prepare students for content during Big Idea 7. Students should have the opportunity to sort, count, and graph a variety of objects.

Numbers 20 and Beyond will be assessed during Q4.

Standards

Math Content Standards	Cross Content Standards
MAFS.K.CC.1.1: Count to 100 by ones and by tens. **MAFS.K.CC.1.2:** Count forward beginning from a given number within the known sequence (instead of having to begin at 1). **MAFS.K.CC.1.3:** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). **MAFS.K.CC.2.4:** Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

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b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
c. Understand that each successive number name refers to a quantity that is one larger.
MAFS.K.CC.2.5:
Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MAFS.K.CC.3.6:
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
MAFS.K.NBT.1.1:
Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
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Suggested Standards for Mathematical Practice
MAFS.K12.MP.4.1:
Model with mathematics.
• How can you model 20 using ten frames?
• How can you model 50 using ten cube trains?
• How can you use counters to model the set?
MAFS.K12.MP.5.1:
Use appropriate tools strategically.
• How could you use a hundred chart to solve the problem?
MAFS.K12.MP.8.1:
Look for and express regularity in repeated reasoning.
• What if you had 3 ten cube trains instead of 2 ten cube trains?
• When you count, what do you know about the next number name?
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<tr><th colspan="2">Big Idea(s)</th></tr>
<tr><td colspan="2">Numbers 11 and beyond.</td></tr>
<tr><th colspan="2">Essential Outcome Question(s)</th></tr>
<tr><td colspan="2">How can you show, count, and write numbers from 11 and beyond?</td></tr>
<tr><th>Conceptual Understandings</th><th>Essential Question(s)</th></tr>
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<td>
• Numbers can be represented in multiple ways.
• We can count sets and compare the number in each set.
• A zero (0) represents a count of no objects.
• When counting to 100 we can count by ones or by tens.
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• How can you show and count 11 and beyond with objects?
• How can you count and write 11 and beyond with words and numbers?
• How can you use two sets of objects to show numbers 11 and beyond in more than one way?
• Why do numbers get larger by one as you count and make groups of
• How can you make a model to solve problems?
• What information can you share about a given number? (describing, comparing)
• How can you use matching and counting to compare sets with the same number of objects?
• Why is one set greater than or less than another set?
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Aligned Learning Goals		District Adopted Materials	Supplemental Resources	Strategies for Differentiation
Count and Identify Number 11-19 12 content + 1 progress monitoring check	Verbally counts to 19 by ones *(CC.1.1.)*	Go Math! Chapter 7 Achieve the Core Go Math Guidance Documents	• CPALMS: Bunny Addition • CPALMS: Let's Count to 20 • CPALMS: Fireflies- Numbers 11-19	Reteach & Enrichment Support: Count and Identify 11-19 The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Count on from any given number to 19 *(CC.1.2)*			
	Writes numbers 11 to 19 *(CC.1.3)*			
	Represents each number 11 to 19 using objects or drawings *(CC.1.3)*			
	Writes the numerals for sets of objects to 19 *(CC.1.3)*			
	Count sets of 11 to 19 by touching each object while saying the name, in an organized pattern (line or circle) or scattered configuration *(CC.2.5)*			
	Count sets 11 to 19, add one object and tell how many (without recounting) *(CC.2.4)*			
	Compose and decompose numbers 11 to 19 *(NBT.1.1)*			

Instructional Strategies and Resources

Children will build on their previous knowledge of numbers from 0 to 10 and begin to conceptualize numbers 11-19. Understanding that numbers can be composed of 10 ones and some more ones is crucial in this stage of learning. Repeated use of connecting cubes, two-color counters and ten frames will help to solidify this concept. Filling a ten-frame with counters and then placing additional counters outside of the ten-frame is one way to model 10 ones and some more ones. This will reinforce the concept of ten as a single unit. Similarly, children can build a ten train using connecting cubes to model ten as a single unit.

- The English number names eleven and twelve do not clarify ten ones and more ones, therefore it is important that students repeatedly practice counting and naming eleven and twelve objects. Eleven can be pictured as 10 ones and 1 more one, twelve as 10 ones and 2 more ones.

- It is important for students to understand that 'teen' numbers refer to 10 ones and some more ones, reflecting the base-ten number system. Thirteen can be pictured as 10 ones and 3 more ones. Use of a ten-frame to indicate this will help students build the foundation for later work with regrouping in addition. Pairing single-digit and related two-digit number names can be helpful at this stage of development. Three paired with thirteen, four paired with fourteen, five paired with fifteen, six paired with sixteen, seven paired with seventeen, eight paired with eighteen, and nine paired with nineteen.

Formative Checkpoint: A continuous process used by teachers and students to utilize formal and informal checks of learning to elicit evidence regarding the degree to which a particular student or class of students has mastered the aligned learning goals. Based on the evidence collected, teachers adjust their ongoing instructional activities.

The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:	*MFAS Tasks K.CC.1.2:*	*MFAS Tasks K.CC.1.3:*	*MFAS Tasks K.CC.2.4*	*MFAS Tasks K.NBT.1.1:*
• Chapter 7 Mid-Chapter Checkpoint • Chapter 7 Test Review and Performance Task • Math Journal Entries	• Count On • Counting Strategies • Count the Dots Game	• Field Trip to the Fire Station • How Many Cubes? • Model and Write Numbers • Matching Ten Frames to Numerals • Fall Math Story	• Conservation of Cardinality	• Decomposing 15 • Composing 13 • Ten Ones and Some Other Ones • Make Tens and Ones

Count and Identify Numbers 20 and Beyond	15 content + 1 progress monitoring check				
		Verbally count to 100 by ones *(CC.1.1)*	Go Math! Chapter 8 Achieve the Core Go Math Guidance Documents	• CPALMS: 100s Day • CPALMS: 100 Puzzles • CPALMS: Let's Go On A Counting Walk • Curious George 100 Day	Reteach & Enrichment Support: Count and Identify 20 and Beyond The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
		Count on from any given number to 100 *(CC.1.2)*			
		Writes numbers to 20 *(CC.1.3)*			
		Count to 100 by 10s *(CC.1.1)*			
		Order numerals to 20 *(CC.1.2)*			
		Represent up to 20 objects with a written numeral *(CC.1.3)*			
		Identify numbers as greater than, less than, or equal to *(CC.3.6)*			

Instructional Strategies and Resources

Children will continue to build on their previous knowledge of numbers from 0 to 19 and begin to conceptualize numbers 20 and beyond. Understanding that numbers can be composed of 10 ones and some more ones is once again crucial in this stage of learning. Children will continue to use ten frames and will use the hundred chart to extend their counting and writing numbers 20 and beyond. It is important that children see how different tools can support their thinking.

- Pairing single-digit and related two-digit number names can again be helpful at this stage of development. Two paired with twenty, three paired with thirty, four paired with forty, five paired with fifty, six paired with sixty, seven paired with seventy, eight paired with eighty, and nine paired with ninety. The use of a fifty chart or hundred chart can help to develop counting and comparing skills.

Providing children with an 'open' number chart and discussing patterns and relationships will help students master counting.

1	2	3	[ ]	5	[ ]	7	[ ]	[ ]	10
11	[ ]	[ ]	14	15	16	[ ]	18	[ ]	20
[ ]	22	23	[ ]	25	[ ]	27	28	29	[ ]
31	[ ]	33	34	[ ]	[ ]	37	[ ]	39	40
[ ]	42	[ ]	44	45	46	47	[ ]	49	[ ]

- What do you notice about the numbers in the columns of the chart?
- How are the numbers in the rows alike?
- When you get to the end of the row, where do you continue counting?
- How can we use the chart to help us count by tens?

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The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:
- Chapter 8 Mid-Chapter Checkpoint
- Chapter 8 Test Review and Performance Task
- Math Journal Entries

MFAS Tasks K.CC.1.1:
- What Day of School Is It?
- Count the Candy Corn
- Count by Ones
- Bundles of Ten

MFAS Tasks K.CC.1.3:
- How Do I Write the Number?
- How Many Cubes Are There?

MFAS Tasks K.CC.3.6:
- Take and Compare
- Animal Line Up

Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint
- Numbers 11 – 19; Teacher Guidelines
- Math Skills Q3 (One-on-One)
    - Subtraction Fluency 0 – 3
    - Conservation to 20
- Numbers 20 and Beyond; Teacher Guidelines

Big Idea 6
Quarters 3 & 4

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
15 – 19 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Two- and Three-Dimensional Shapes*
Two and Three- Dimensional Shapes focuses on developing students' ability to identify and describe two and three-dimensional shapes. Students then begin to recognize common attributes in two and three dimensional shapes as well as discovering that three dimensional shapes are a combination of two dimensional figures. Using the **Mathematical Practices** stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of the attributes of two and three dimensional shapes.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 6. View the attached document, K Big Idea 6 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 6.

- Bodily Kinesthetic
- Classroom Objects
- Connecting Cubes
- Dot Paper
- Paper Two-Dimensional objects
- Pattern Blocks
- Three-Dimensional Shapes

Teacher Note:
Building and making shapes from Chapter 9 will be assessed during Big Idea 6 along with all content in Chapter 10.

Standards

Math Content Standards	Cross Content Standards
MAFS.K.G.1.1: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above, below, beside, in front of, behind, and next to.* **MAFS.K.G.1.2:** Correctly name shapes regardless of their orientations or overall size. **MAFS.K.G.1.3:** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). **MAFS.K.G.2.4:** Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. c. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). d. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic

<table>
<tr><td>(e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
MAFS.K.G.2.5:
Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
MAFS.K.G.2.6:
Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</td><td>SC.K.N.1.4:
Observe and create a visual representation of an object which includes its major features.
SC.K.P.8.1:
Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.
Suggested Standards for Mathematical Practice
MAFS.K12.MP.3.1:
Construct viable arguments and critique the reasoning of others.
• How can you use the word below to describe the shapes in the picture?
• How can you use the words ‘next to’ to describe the shapes in the picture?

MAFS.K12.MP.7.1:
Look for and make use of structure.
• Describe how a sphere is like a cylinder. Describe how they differ.
• How are a cube and a cylinder alike? How are they different?
• What two-dimensional shape is curved?
• Which shapes have no curves?</td></tr>
<tr><th colspan="2">Big Idea(s)</th></tr>
<tr><td colspan="2">Two- and Three-Dimensional Shapes</td></tr>
<tr><th colspan="2">Essential Outcome Question(s)</th></tr>
<tr><td colspan="2">How can you identify, name and describe two- and three-dimensional shapes?</td></tr>
<tr><th>Conceptual Understandings</th><th>Essential Question(s)</th></tr>
<tr><td>• Shapes can be identified by their attributes.
• Shapes can be combined to form another shape.
• Two-dimensional shapes are “flat” or lie in a plane.
• Three-dimensional shapes are solid.</td><td>• How can you describe two-dimensional shapes?
• How can you describe three-dimensional shapes?
• What two-dimensional shapes can you find on a three- dimensional shape?</td></tr>
</table>

Aligned Learning Goals		District Adopted Materials	Supplemental Resources	Strategies for Differentiation
Two-Dimensional Shapes 5 content	Verbally name and identify two-dimensional shapes *(G.1.2)*	Go Math! Chapter 9 Achieve the Core Go Math Guidance Documents	• Illuminations: Buttons! Buttons! • CPALMS: Shape Hunt • CPALMS: ShapeBot	Reteach & Enrichment Support: Two-Dimensional Shapes The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Verbally describe two-dimensional shapes by different attributes *(G.2.4)*			
	Draw and make shapes out of other shapes *(G.2.5, G.2.6)*			
	Compose simple shapes to make larger shapes *(G.2.6)*			

Instructional Strategies and Resources

During this time of instruction children will be exposed to two-dimensional shapes and will begin to develop their spatial sense. Students will be asked to identify, create, compose, compare and analyze shapes based on attributes. It is important to allow students to use ‘accessible vocabulary’, then be introduced to ‘formal vocabulary’ as it relates to shapes. i.e. Children may describe a square as having four points, the teacher will introduce the term vertex and model using the term ‘vertex’ that will eventually replace the term ‘points’.

“…learning the characteristic properties of a geometrical shape is essential because the can for the basis of higher levels of thinking and help in gaining a practical and intuitive grasp of the mathematics of space.” (Triadafillidis, 1995, p.225) With this in mind it is important for students to be able to talk about and describe shapes using the properties of the shapes (number of sides, number of vertices,)

Allow ample instructional time for students to model with mathematics by using a variety of hands on activities. i.e. Children collect and sort items that represent a triangle, square, rectangle, hexagon and circle. Ask students “How do you know which one is a triangle?” Children begin by identifying shapes seen in the environment, then progress to identifying shapes by their specific attributes. Students will be asked to compose shapes from smaller shapes and be able to identify which smaller shapes create the larger shape.

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The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:
- Chapter 9 Mid-Chapter Checkpoint
- Chapter 9 Test Review and Performance Task
- Math Journal Entries

MFAS Tasks K.G.1.2:
- Identify the Shapes
- Is it Still a Triangle?

MFAS Tasks K.G.2.4:
- How Are These Shapes Alike?
- Compare Hexagons
- Compare Rectangles and Triangles

MFAS Tasks K.G.2.6
- Compose a Rectangle
- Compose a Hexagon
- Can You Make a Rectangle?
- Compose a Square

Three-Dimensional Shapes 11 content + 1 progress monitoring check	Verbally name and identify three-dimensional shapes *(G.1.2)*	Go Math! Chapter 10 Achieve the Core Go Math Guidance Documents	• Illuminations: Shapes and Poetry • CPALMS: Shapes of Africa	Reteach & Enrichment Support: Three-Dimensional Shapes The above document provides opportunities for reteach and enrichment with the current aligned learning goal.
	Verbally describe three-dimensional shapes and their relative position using terms like above, below, beside, in front of, and behind *(G.1.1)*			
	Verbally describe three-dimensional shapes using the terms flat side and curved surface *(G.1.3)*			
	Analyze and compare two-dimensional and three-dimensional shapes *(G.2.4)*			

Instructional Strategies and Resources

Children will build on their knowledge of two-dimensional shapes and be able to differentiate solid shapes from flat shapes. Once students are able to distinguish two-dimensional and three-dimensional shapes, they can begin identifying attributes of solid shapes. i.e. curved surface, flat surface, number of edges, etc. They can then extend their knowledge of shapes by recognizing and identifying that some solid shapes have faces that are squares, rectangles, or circles. i.e. The faces of a cube are squares. The flat surface of a cylinder is a circle.

As with two-dimensional shapes is important that children have repeated opportunities to describe the attributes of three-dimensional shapes using 'accessible language' and then learn to use 'formal language' to describe the same attributes.

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The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction.

Resources:
- Chapter 10 Mid-Chapter Checkpoint
- Chapter 10 Test Review and Performance Task
- Math Journal Entries

MFAS Tasks K.G.1.1:
- What Shape?
- Shapes in a Classroom
- Locations of Shapes
- Changing Position
- Where is the Sphere?

MFAS Tasks K.G.1.2:
- Name the Shape
- Small and Large Spheres
- Find That Shape

MFAS Tasks K.G.1.3:
- Spheres and Circles
- Is it Plane or Solid?
- Comparing a Cylinder to a Circle
- Squares and Cubes

MFAS Tasks K.G.2.4:
- Cubes and Prisms

Sample: Standards-based Check and Teacher Guidelines – Blueprint
- Two- and Three-Dimensional Shapes; Teacher Guidelines

Big Idea 7
Quarter 4

Academic Plan
Mathematics – Grade Kindergarten (Course #5012020)

Suggested Big Idea Length:
8 – 12 days

Adopted Instructional Materials: Houghton Mifflin Harcourt, Go Math!

Big Idea Description: *Data*
In this Big Idea students will learn about the data display process by beginning to ask questions, creating recording procedures and summarizing the data that they collect to answer questions. Displaying data provides children an excellent opportunity to solve problems that arise in every life. Children will explain their reasoning about why objects do or do not belong to a particular group this will help children deepen their understanding of classification. Using the **Mathematical Practices** stated in the District Adopted Materials, engage the students in multiple opportunities to reinforce their knowledge of classifying, sorting, and counting objects into specific categories.

Manipulatives: Below are some of the manipulatives that should be included in the instruction of Big Idea 7. View the attached document, K Big Idea 7 Manipulatives, for a comprehensive list of manipulatives and their suggested usage during Big Idea 7.

- Bodily Kinesthetic
- Paper Two-Dimensional objects
- Classroom Objects
- Two-Color Counters
- Connecting Cubes

Standards

Math Content Standards	Cross Content Standards
MAFS.K.MD.2.3: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**LAFS.K.SL.1.1:** Participate in collaborative conversations with diverse partners about *kindergarten topics* and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. **LAFS.K.SL.1.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **LAFS.K.W.1.2:** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. **SC.K.N.1.1:** Collaborate with a partner to collect information. **SC.K.N.1.3:** Keep records as appropriate – such as pictorial records – of investigations conducted.

<table>
<tr><td colspan="3"></td><td colspan="3">SC.K.P.8.1:
Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.</td></tr>
<tr><td colspan="3"></td><td colspan="3">Suggested Standards for Mathematical Practice</td></tr>
<tr><td colspan="3"></td><td colspan="3">MAFS.K.MP.1.1 :
Make sense of problems and persevere in solving them.
• How can the objects be sorted?
• How could you create a graph for these objects?
• Which group has more or less? How do you know?</td></tr>
<tr><th colspan="6">Big Idea(s)</th></tr>
<tr><td colspan="6">Data</td></tr>
<tr><th colspan="6">Essential Outcome Question(s)</th></tr>
<tr><td colspan="6">How can comparing and sorting objects help you read and display information?</td></tr>
<tr><th colspan="3">Conceptual Understandings</th><th colspan="3">Essential Question(s)</th></tr>
<tr><td colspan="3">• Objects can be sorted and classified based on different attributes.
• A graph can be used to represent data.</td><td colspan="3">• How can you solve problems using the strategy using logical reasoning?
• How can you read a graph to count objects that have been classified into categories?
• How can you classify and count objects by color?</td></tr>
<tr><th colspan="2">Aligned Learning Goals</th><th>District Adopted Materials</th><th colspan="2">Supplemental Resources</th><th>Strategies for Differentiation</th></tr>
<tr><td rowspan="3">Sorting
9 content + 1 progress monitoring check</td><td>Sort and classify by color, shape, and size (MD.2.3)</td><td rowspan="3">Go Math!
Chapter 12

Achieve the Core Go Math Guidance Documents</td><td colspan="2" rowspan="3">• Task Card: Classified
• CPALMS: Comparing Objects
• CPALMS: Measuring Madness (uses math literature Measuring Penny by Loreen Leedy)</td><td rowspan="3">Reteach & Enrichment Support: Sorting

This above document provides opportunities for reteach and enrichment with the current aligned learning goal</td></tr>
<tr><td>Build a concrete graph (MD.2.3)</td></tr>
<tr><td>Sort objects into categories and count the objects (MD.2.3)</td></tr>
</table>

Instructional Strategies and Resources
Children's initial explorations of sorting will begin by being able to sort a collection of objects by color, shape, or size. Keep in mind that children cannot sort collections of objects on attributes they cannot distinguish. Once objects are sorted, students will count and compare objects in each category. Guide students to use language such as "the same as," "equal, " "more than," "less than," or "fewer than". **Children's Literature:** • *A Circle Here, A Square There* by David Dieh • *The Greedy Triangle* by Marilyn Burns • *When a Line Bends, a Shape Begins* by Rhoda Gowler Greene • *Not a Box* by Antoinette Portis • *Shape by Shape* by Suse MacDonald • *Skippyjon Jones Shape Up* by Judy Schachner
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The following are suggestions teachers may consider as they plan the formative checkpoint they will use for this big idea of instruction. *Resources:* • Chapter 12 Mid-Chapter Checkpoint • Math Journals *MFAS Tasks K.MD.2.3:* • Sorting Buttons • Sorting Objects • Shape Sort • Sorting Color Tiles • Sorting Animals • Sort the Tiles

Sample: Suggested Standards-based Checks and Teacher Guidelines - Blueprint
• Data Collections; Teacher Guidelines
• Math Skills Q4 (One-on-One)
    ○ Fluency 0 – 5
    ○ Count to 100 by 10s/Count On