

**BIG IDEA:** The study of geometry in kindergarten is essential, as students must be able to recognize and visualize shapes in their surroundings. Many students are already exposed to shapes as they play, draw, color, build and explore with toys and technology. These experiences help to develop spatial reasoning, which is important in daily life for interpreting and making drawings, forming mental images, visualizing changes, and generalizing about perceptions in the environment. Kindergarteners will identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways with different sizes and orientations as well as three-dimensional shapes, such as cubes, cones, cylinders, and spheres. Being able to talk about shapes and their characteristics is an indicator of spatial sense. An example is describing shapes by the number of vertices and sides. At the kindergarten level, students will learn that specific attributes (number of sides, angles, etc.) define what a shape is called and other attributes (color, size, and orientation) do not. Using attributes students find and identify shapes around home and school. They recognize, compare, and sort shapes based on geometric attributes.

Adapted from Go Math: Teaching for Depth, pg. 353E

#### Professional Development Videos

[Number Sense, Grades K-2, Segment 2](#)

[Number Sense, Grades K-2, Segment 4](#)

#### Additional Quarter 4 Resources

[Building Fluency Through Number Talks – Q4](#)

[Building Fluency Through Story Problems – Q4](#)

[Building Fluency Through Story Problems \(Spanish\) - Q4](#)

**ESSENTIAL QUESTION:** How can you identify, name, and describe two-dimensional shapes?

**STANDARDS:** K.G.2, K.G.4, and K.G.6

#### ELD STANDARDS:

ELD.PI.K.1-Exchanging information/ideas via oral communication and conversations.

ELD.PI.K.3-Offering opinions and negotiating with/persuading others.

ELD.PI.K.5-Listening actively and asking/answering questions about what was heard.

ELD.PI.K.9- Expressing information and ideas in oral presentations.


ELD.PI.K.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.




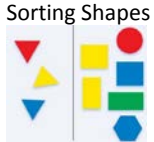
ELD.PI.K.12-Selecting and applying varied and precise vocabulary.

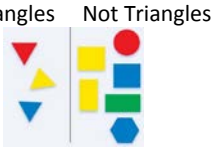



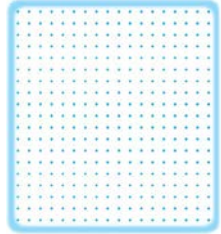
**LITERACY CONNECTIONS:** [Go Math! Math Readers](#) (The actual books can be found in your Grab-and-Goes the Kits)


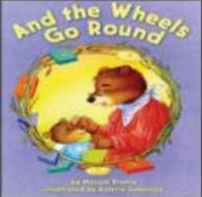

[And the Wheels Go Round](#) Students read the book and learn about the different shapes used to make a cart.

[I Know Shapes](#) Students read the book and identify circles, squares, rectangles, and triangles.

Lessons	Focus	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools& Resources <a href="#">Go Math Teacher Resources GK</a>	Vocabulary	Connections (ENGAGE in Prior Knowledge)	Academic Language Support	Talk & Share
9.1 Identify and Name Circles  9.2 Describe Circles	Identify, Name, and Describe a Circle	<a href="#">K.G.2</a> <a href="#">K.G.4</a>  Companion pg. 169, 172  <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a>	How can you identify and name circles?  How can you describe circles?	A circle is defined as a closed curve lying in a plane, all points of which are equidistant from the center. To add even more meaning to the name circle, use activities like these: 1) Have students trace circles in the air as you say the following: Trace around and around. Circles are round. Circles do not have straight parts. 2) Draw a circle and an oval. Help students compare them. 3) Provide a piece of string about two yards long with a piece of chalk tied to one end. On a paved surface outdoors, let a student hold one end of the string on the ground while another student stretches the string and traces a circle on the paved surface. Let students walk or skip around it.	<a href="#">Go Math! Grab and Go Kit</a> This link provides an overview on how to utilize this in the classroom  Foam Shapes of different sizes  <a href="#">Shapes, Shapes, and More Shapes</a>  <a href="#">Draw A Picture with Shapes</a>	Circle curve Flat 2-dimensional	Give students a bag of various shapes (circles, squares, triangles) and have them sort them by attribute. Have them name the shapes they know and explain to a partner how they would describe each pile.  	<b>ELD Standards</b> • <a href="#">ELD Standards</a> • <a href="#">ELA/ELD Framework</a> • <a href="#">ELPD Framework</a> • <a href="#">ELL Math Instruction Framework</a>  <b>Access Strategies</b> • <a href="#">Organizing Learning for Student Access to Challenging Content</a>	How can you describe circles?  What does a circle look like?  What classroom objects are shaped like a circle?

				Assist students in understanding the difference between the description of a circle (2-dimensional, flat, and doesn't take up space) and a sphere (3-dimensional, not-flat, and does take up space).			Create a chart and have students describe the attribute of circles (you will complete the other columns in the coming days).	<ul style="list-style-type: none"> <li><a href="#">Student Engagement Strategies</a></li> <li><a href="#">Problem Solving Steps and Approaches</a></li> </ul>	
9.3 Identify and Name Squares  9.4 Describe Squares	Identify, Name, and Describe Squares	<a href="#">K.G.2</a> <a href="#">K.G.4</a>  Companion pg. 169, 172  <a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a> <a href="#">MP 8</a>	How can you identify and name squares?  How can you describe squares?	<p>As students learn more about two-dimensional shapes and their attributes, they are building background for a later more formal study of geometry. But working with shapes in kindergarten is much more than this. Knowing about shapes provides a foundation for understanding the world. Working with shapes strengthens students' spatial sense.</p> <p>Geometry also connects to numbers as students tell how many sides or vertices a shape has.</p> <p>Geometry also connects to other subject areas such as art, science, and social studies.</p> <p>As students explore two-dimensional shapes, help them develop a strong understanding of the similarities and differences by pointing out attributes (straight sides, vertices, and curves). In the lesson about squares and rectangles, emphasize that the corners or vertices are square corners and square vertices. This will prevent misunderstanding when students learn about parallelograms in later grades.</p>	Foam shapes of different sizes	Square rectangle 2-dimensional Flat Vertex/ vertices sides	 <p>Chart the attributes of squares. Have a discussion about the difference between circles and squares to show their work. Have students build squares of different sizes. Have students trace the different squares that they created to show their work. Have students exchange their drawings with a partner and count and write the number of sides and vertices on the large square. Ask students to discuss whether the size of the square changes the number of sides and vertices the square has.</p>	<p><b>Equitable Talk</b></p> <ul style="list-style-type: none"> <li><a href="#">Accountable Talk Simply Stated</a></li> <li><a href="#">Equitable Talk Conversation Prompts</a></li> <li><a href="#">Accountable Talk Posters</a></li> <li><a href="#">Five Talk Moves Bookmark</a></li> <li><a href="#">Effective Math Talks</a></li> </ul> <p><b>Cooperative Learning</b></p> <ul style="list-style-type: none"> <li><a href="#">Cooperative Learning Table Cards</a></li> <li><a href="#">Collaborative Learning Table Mats</a></li> <li><a href="#">Learning Chart Suggestions</a></li> </ul> <p><b>Interactive Activities</b></p> <ul style="list-style-type: none"> <li><a href="#">Kindergarten Interactive Activities Chapter 9</a></li> </ul>	<p>What does a square look like?</p> <p>How can you describe squares?</p> <p>What classroom objects are shaped like a square?</p> <p>*Children may have difficulty distinguishing squares from other rectangles. Trace over the sides of a square and a rectangle that is not a square to show that with a square all 4 sides must match. If one or more sides is longer, it is not a square.</p>
9.5 Identify and Name Triangles  9.6 Describe Triangles	Identify, Name, and Describe Triangles	<a href="#">K.G.2</a> <a href="#">K.G.4</a>  Companion pg. 169, 172  <a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a> <a href="#">MP 8</a>	How can you identify and name triangles?  How can you describe triangles?	<p>Using two-dimensional shape manipulatives as students learn shape names and attributes helps students make visual discriminations. Working with shapes keeps students' attention; handling and showing the two-dimensional shapes aids students' explanations as they refer to them. Students can feel the sides and vertices of the two-dimensional shapes, point to them, and trace along the sides with their fingers. Because they deal with shapes of different sizes and colors, students learn that shapes have constant attributes no matter what their sizes, colors, and orientations. A student may misinterpret sides as front and back. Explain that sides of shapes form the outside</p>	<a href="#">Shapes, Shapes, and More Shapes</a>  <a href="#">Draw A Picture with Squares, Triangles, and Circles</a>	Triangle Sides 2-dimensional Vertex/ Vertices flat	 <p>Chart the attributes of triangles. Have a discussion about similarities and differences between the 3 shapes.</p> <p>Place an assortment of triangles, circles, and square pattern blocks in a paper bag. Demonstrate how to</p>	<p><b>Model and Share:</b></p> <p>Sorting Shapes</p> 	<p>What does a triangle look like?</p> <p>How can you describe triangles?</p> <p>What classroom objects are shaped like a triangle?</p>

				<p>borders of that shape. Have a student trace a finger along the side of paper triangle and the sides of a two-dimensional shape manipulative. You may also use 3 pieces of yarn to form a triangle to help clarify the “sides” of a shape.</p> <p>Triangles    Not Triangles</p> 	 <p>Foam Shapes</p>		<p>reach in, pick a shape, and describe and name the shape before pulling it out. Have students take turns describing and guessing the name of the shape before they pull it out of the bag.</p>	<p>Drawing with Shapes</p>  <p>Example Non-Example</p>  <p>Grid Paper Drawings</p>  <p><b>Literacy Connections:</b></p>	
<p>9.7 Identify and Name Rectangles</p> <p>9.8 Describe Rectangles</p>	<p>Identify, Name, and Describe Rectangles</p>	<p><a href="#">K.G.2</a> <a href="#">K.G.4</a></p> <p>Companion pg. 169, 172</p> <p><a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a> <a href="#">MP 8</a></p>	<p>How can you identify and name rectangles?</p> <p>How can you describe rectangles?</p>	<p>In these lessons, students sort two-dimensional shapes that are rectangles. To add more depth, you may use one or more of the following activities:</p> <ul style="list-style-type: none"> <li>Let students predict the shapes that result if they cut a paper rectangle diagonally, across the middle horizontally, and across the middle vertically. Have them fold the paper, make the cuts, and see what the results are.</li> <li>Let students make designs and pictures of objects by gluing a variety of small rectangles to paper.</li> <li>Have students make rectangles “dance,” moving them into different positions. Emphasize that the shapes remain rectangles, no matter what positions they are in. Ask the following: Is a square a rectangle? Yes, a special rectangle. A square has all the attributes of a rectangle, both are closed shapes with 4 straight sides and four right angles. However, the sides of a square are of equal length; that makes it special and unique.</li> </ul>	<p>Rectangle square Sides Vertex/ Vertices 2-dimensional flat</p>	<p>Invite students to use pattern blocks to build rectangles of different sizes including squares. Have students arrange pattern blocks in different ways, such as using horizontal or vertical formations. They can also use more than one row to form rectangles. Students can trace the different rectangles they created and can record how many pattern blocks they used.</p>	<p>How can you identify and name rectangles?</p> <p>How can you describe rectangles?</p> <p>What classroom objects are shaped like rectangles?</p>		

<p>9.9 Identify and Name Hexagons</p> <p>9.10 Describe Hexagons</p>	<p>Identify, Name, and Describe Hexagons</p>	<p><a href="#">K.G.2</a> <a href="#">K.G.4</a></p> <p>Companion pg. 169, 172</p> <p><a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a> <a href="#">MP 8</a></p>	<p>How can you identify and name hexagons?</p> <p>How can you describe hexagons?</p>	<p>Most of the two-dimensional shapes that students have seen so far have been circles and regular polygons. You may want to help students see that the attributes they have learned for identifying polygons apply to irregular polygons as well. Draw hexagons like these on the board.</p>  <p>Ask students how many of these shapes are hexagons. Students may say that only the first shape is a hexagon. Have volunteers come to the board and count the sides. Explain that the sides of a hexagon do not need to be of equal length, so all of those shapes are hexagons.</p>	<p><a href="#">Draw a Picture using all 5 Shapes</a></p> <p>Foam Shapes</p>	<p>Hexagons Sides Vertex/ vertices Flat 2-dimensional</p>	<p>Ahead of time, label sheets of construction paper with headings such as: Circles, Rectangles, Hexagons, Circles, Squares, Triangles. Have students search magazines, newspapers, catalogs, etc. to find examples of objects that model the two-dimensional shape written on the top of their paper. Have students make a poster for each shape by gluing the pictures on the construction paper.</p>	<p><b>Literature</b></p>  <p><a href="#">And the Wheels Go Round</a> Students read the book and learn about the different shapes used to make a car.</p> <p><a href="#">I Know Shapes</a> Students read the book and identify circles, squares, rectangles, and triangles.</p>	<p>How can you identify and name hexagons?</p> <p>How can you describe hexagons?</p>
<p>9.11 Compare Two-Dimensional Shapes</p>	<p>Use words alike and different to compare two-dimensional shapes by attributes</p>	<p><a href="#">K.G.4</a></p> <p>Companion pg. 172</p> <p><a href="#">MP 5</a> <a href="#">MP 7</a> <a href="#">MP 8</a></p>	<p>How can you use the words alike and different to compare two-dimensional shapes?</p>	<p>When comparing shapes, students should be able to find structure. Students learn that a shape may be round and curved or it may have a certain number of sides and vertices. As students learn more shapes they can use structure to know that to identify the shape they should look at the attributes. When students learn about more shapes in later grades they will be looking beyond the number of sides and vertices to parallel sides. It is important students understand that shapes have a certain structure and it is this structure that defines what shape it is. They can use their knowledge of structure to solve problems. They should see two sides that meet and know they can make a triangle by adding one more side.</p>	<p>Foam Shapes</p>	<p>Circles Triangles Rectangles Squares Hexagons Alike Different 2-dimensional Flat Vertex/ vertices Sides curve</p>	<p>Display pairs of objects that are the same color but a different type or size. Ask students to tell how the shapes are alike (the same) or different. Repeat with other pairs of objects that vary by type, color, or size.</p>	<p><b>Literature</b></p> <p><a href="#">Hippo and Fox Sort Socks</a></p>  <p><b>Sentence Frame:</b></p>	<p>Draw a red circle, blue triangle, green square, red hexagon, and blue rectangle.</p> <p>Using the words “alike” and “different”, compare these shapes.</p>
<p>9.12 Draw to Join Shapes</p>	<p>Solve problems using the strategy <i>draw a picture</i>.</p>	<p><a href="#">K.G.6</a></p> <p>Companion pg. 174</p> <p><a href="#">MP 5</a> <a href="#">MP 7</a> <a href="#">MP 8</a></p>	<p>How can you solve problems using strategy <i>draw a picture</i>?</p>	<p>Most pattern blocks have sides that are the same length. The longest side of the trapezoid block is twice the length of its other sides. This feature will be useful as students combine the blocks to make more complex shapes.</p> <p>In some cases, there is more than one way to combine shapes to fill the outline of another shape. For example, three triangles or a triangle and a blue rhombus will fill the outline of a red trapezoid. A hexagon block’s outline may be filled with six triangles; two trapezoids; three blue rhombuses; two blue rhombuses and two triangles; one</p>	<p>Foam Shapes Pattern blocks</p>	<p>Hexagon Square Rectangle Circle Triangle Trapezoid Rhombus</p>	<p>Hand students a sheet of paper with three hexagons outlined on it. Have students choose one pattern block and trace its shape attached to each of the three hexagons. Students should switch papers with a partner and use pattern blocks to fill in</p>	<p>I can tell if a shape is a <u>(shape)</u> by _____.</p> <p>____ and ____ are alike because ____.</p> <p>____ and ____ are different because ____.</p> <p>Give each student a square and a rectangle. Have them</p>	<p>Which shapes could you join together to make a rectangle? Draw a picture to show your answer.</p>

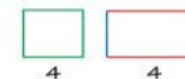
trapezoid and three triangles; or one trapezoid, one triangle, and one blue rhombus.  
In this lesson, students will explore using pattern blocks to compose other shapes.



the shape three different ways. They can outline the blocks and color in the traced shapes.



trace the shapes on a piece of paper, count the number of sides for each shape, and write the number below the shapes. Have students use different colored crayons to color the sides that have the same length. Then have students think of how the two shapes would look if they were turned. Ask them to draw what the turned shapes would look like.



**Assessments:**

Go Math [Chapter 9 Test](#)

Go Math Chapter 9 Performance Task: [Shape Pictures](#)

**BIG IDEA:** Students will understand that specific attributes (number of sides, angles, etc.) define what a shape’s name is and other attributes (color, size, orientation, etc.) do not. Using the attributes, students can identify and describe what shapes look like such as cubes, cones, cylinders, and spheres. At the kindergarten level, children need numerous activities to explore various forms of shapes including different types of triangles (equilateral, isosceles, scalene); different sizes (big and small); and different orientations (rotated upside down or to the right). In addition, they will recognize, compare, and sort shapes based upon their geometric attributes. A variety of experiences must be provided for students to locate both two-dimensional and three-dimensional objects as well as describe the positional location of the objects.

Adapted from Go Math: Teaching for Depth, pg. 409E

**Professional Development Videos**

[Measurement and Geometry, Grades K-2, Segment 1](#)

**Additional Quarter 4 Resources**

[Building Fluency Through Number Talks – Q4](#)  
[Building Fluency Through Story Problems – Q4](#)  
[Building Fluency Through Story Problems \(Spanish\) - Q4](#)

**ESSENTIAL QUESTION:** How can identifying and describing shapes help you sort them?

**STANDARDS:** K.G.1, K.G.2, K.G.3, K.G.4, K.G.5

**ELD STANDARDS:**

ELD.PI.K.1 - Exchanging information/ideas via oral communication and conversations.

ELD.PI.K.3 - Offering opinions and negotiating with/persuading others.

ELD.PI.K.5 - Listening actively and asking/answering questions about what was heard.

ELD.PI.K.9 - Expressing information and ideas in oral presentations.


ELD.PI.K.11 - Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.


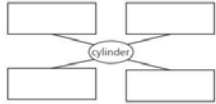

ELD.PI.K.12 - Selecting and applying varied and precise vocabulary.





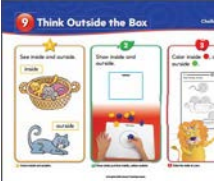

**LITERACY CONNECTIONS:** [Go Math! Math Readers](#) - The actual books can be found in your Grab-and-Go Math Kits.

[I Know Big and Small](#) - Students read the book and identify big and small objects.

[Curious George Goes to a Toy Store](#) (pg. 31) - Students read the book and learn about three-dimensional shapes.

Lessons	Focus	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools& Resources <a href="#">Go Math</a> <a href="#">Teacher Resources GK</a>	Vocabulary	Connections (ENGAGE in Prior Knowledge)	Academic Language Support	Talk & Share
10.1 Hands On: Three-Dimensional Shapes	Analyze and compare three-dimensional shapes by attributes	<a href="#">K.G.4</a>  Companion pg. 172  <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a>	How can you show which shapes stack, roll, or slide?	Why do we sort shapes? Sorting shapes helps you learn visual discrimination. That is the ability to tell whether things are the same or different. Working with sorting rules is one of the foundations of working with algebra; yet it is also useful in everyday life.	<a href="#">Find the Shapes</a>   <a href="#">Workmat 3 – Four-part Mat</a>  3-D shapes, real world examples of spheres,	Flat surface, curved surface, roll, stack, slide	Guide students to transition from thinking about plane shapes to thinking about solid shapes. Display a circle and a sphere. What is different about these two shapes? Will it slide or stack? Guide students into explaining that the circle is flat and the sphere is not and can roll. Have children guess if each of the shapes will slide or stack, and then let children show how the sphere does not slide or stack. Can you think of any other objects that also roll?	<b>ELD Standards</b> <ul style="list-style-type: none"> <li><a href="#">ELD Standards</a></li> <li><a href="#">ELA/ELD Framework</a></li> <li><a href="#">ELPD Framework</a></li> <li><a href="#">ELL Math Instruction Framework</a></li> </ul> <b>Access Strategies</b> <ul style="list-style-type: none"> <li><a href="#">Organizing Learning for Student Access to Challenging Content</a></li> </ul>	Have each student choose a three-dimensional shape and share whether their shape stacks, rolls, or slides and why. You may provide the sentence frame, “My shape ____ (stacks, rolls, or slides) because it has a ____ (flat surface, curved surface, or both).

					cubes, cylinders, and cones				
10.2 Hands On: Identify, Name, and Describe Spheres	Identify, name, and describe three-dimensional shapes	<a href="#">K.G.2</a> Companion pg. 169  <a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a> <a href="#">MP 7</a>	How can you identify, name, and describe three-dimensional shapes?	As part of their vocabulary building and extension of mathematical knowledge, kindergarten children are ready to describe and identify three-dimensional shapes or solid shapes, such as spheres, cylinders, cubes, and cones. In this chapter, children will widen and deepen their knowledge as they learn the names of the shapes, sort them according to their properties, and compare them to two-dimensional, or flat, shapes. They will find and identify the many examples of these geometric shapes in their school environment. This helps them become more aware of the mathematics in real life. It also lays the foundation for later work with volume and surface area of three-dimensional shapes. In addition, children will use sets of three-dimensional models. As children hold and arrange the models, they have opportunities to feel and see their surfaces. Working with models complements work with pictures and helps children understand differences between three-dimensional and two-dimensional objects. As they hold and examine the cube models in this lesson, children will explore a cube's six flat surfaces, or faces. Children will stack and slide cubes and see that they do not roll. They will also recognize that the flat surfaces are all the same size and they are shaped like squares.	<a href="#">Find the Shapes</a>   <a href="#">Workmat 3 – Four-part Mat</a>  3-D shapes, real world examples of spheres, cubes, cylinders, and cones	Three-dimensional shapes, sphere, cube, flat surface cylinder, curved surface, cone	In a paper bag have a three-dimensional shape (sphere, cube, cylinder, or cone). Have each student reach into the bag without looking and describe the shape to their partner without taking it out of the bag. Try to guide them in using the vocabulary words flat surface and curved surface. If a student is able to identify the shape have them explain how they know.	<ul style="list-style-type: none"> <li>• <a href="#">Student Engagement Strategies</a></li> <li>• <a href="#">Problem Solving Steps and Approaches</a></li> </ul> <p><b>Equitable Talk</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Accountable Talk Simply Stated</a></li> <li>• <a href="#">Equitable Talk Conversation Prompts</a></li> <li>• <a href="#">Accountable Talk Posters</a></li> <li>• <a href="#">Five Talk Moves Bookmark</a></li> <li>• <a href="#">Effective Math Talks</a></li> </ul> <p><b>Cooperative Learning</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cooperative Learning Role Cards</a></li> <li>• <a href="#">Collaborative Learning Table Mats</a></li> <li>• <a href="#">Seating Chart Suggestions</a></li> </ul> <p><b>Vocabulary Strategy:</b> Have students complete the Semantic Map graphic organizer. The organizer should include a definition, an illustration, an example, and non-example.</p>  <p><b>Literacy Connections:</b></p>	Have students identify a real object that is shaped like a sphere, cube, cylinder, or cone. Have them share their object and tell what they know about that shape.
10.3 Hands On: Identify, Name, and Describe Cubes									
10.4 Hands On: Identify, Name, and Describe Cylinders									
10.5 Hands On: Identify, Name, and Describe Cones									
10.6 Problem Solving: Two- and Three-Dimensional Shapes	Solve problems by using the strategy <i>use logical reasoning</i>	<a href="#">K.G.3</a> Companion pg. 170  <a href="#">MP 4</a> <a href="#">MP 5</a> <a href="#">MP 7</a>	How can you solve problems using the strategy use logical reasoning?	Students should be able to find patterns or structure to help them make comparisons between two- and three-dimensional shapes. In this chapter, children learn that three-dimensional, or “solid,” shapes have flat surfaces and/or curved surfaces. A cube, for example, has six flat surfaces. Children learn that some solids have no flat surfaces at all, such as a sphere. As they analyze and compare two- and three-dimensional objects, children will start to see the relationship between flat shapes and solid shapes. They will recognize that solid shapes have faces that look like the flat shapes.	<a href="#">Get in Shape!</a>   2-D shapes 3-D shapes	Flat, solid, three-dimensional shapes, two-dimensional shapes	Ask students to tell what they know about a cube. Hold up a cube and a square. Ask students to tell what is the same about the two shapes. What is different about the two shapes? What shape does the flat side of the cube look like?	<p>Have students choose a real object that has a solid shape. Invite partners to share their object and tell what they know about flat and solid shapes. Encourage them to use math words, like the names of three-dimensional shapes, when they talk about their drawings.</p>	

10.7 Hands On: Model Shapes	Model two- and three-dimensional shapes by building and drawing	<a href="#">K.G.5</a> Companion pg. 173  <a href="#">MP 3</a> <a href="#">MP 8</a>	How can you model shapes in the real world?	Building models of two- and three-dimensional shapes solidifies children’s geometric understanding. In previous lessons children have identified, sorted, and compared both two- and three-dimensional shapes. They have learned to talk about the properties of a shape, using the appearance of the shape to define it. Modeling a cube or any other shape, by building it with simple straws and clay helps children take their geometric thinking to the next level. As they build this shape skeleton, children can focus on the shape’s geometric properties and the essence of what makes shapes alike and different. This modeling strips away some of the non-essential properties of a shape, such as color or size, and helps children begin to understand how and why shapes are classified.	 <p>Get in Shape!</p> <p>Use clay and toothpicks or straws to model two- and three-dimensional shapes.</p>	Flat, solid, cube, square, sphere, vertices	Have students sort a collection of shapes into groups of 2D and 3D shapes. Ask students the following: How are the two-dimensional shapes the same? How are the three-dimensional shapes the same? What would a model of a two-dimensional shape look like? How might a model of a three-dimensional shape be different?	<a href="#">Curious George Goes to a Toy Store</a> (pg. 31)  <a href="#">Up, Up to the Top</a> (pg. 25)  <a href="#">I Know Big and Small</a>    <b>Model and Discuss:</b>   <p>sphere cylinder cube</p> <p>3-D shapes and how they are alike and different from 2-D shapes</p>	Have students first use clay and straws to model, and then describe a solid shape. Ask them to explain how building models of solid real-world shapes helps them learn more about the shapes. Encourage children to use math words like <i>solid shape</i> and <i>vertices</i> when they talk about their models.
10.8 Above and Below  10.9 Beside and Next To  10.10 In Front Of and Behind	Use the terms <i>above</i> , <i>below</i> , <i>beside</i> , <i>next to</i> , <i>in front of</i> , and <i>behind</i> to describe shapes in the environment	<a href="#">K.G.1</a> Companion pg. 168  <a href="#">MP 4</a>	How can you use the terms <i>above</i> , <i>below</i> , <i>beside</i> , <i>next to</i> , <i>in front of</i> , and <i>behind</i> to describe shapes in the environment?	In the next few lessons, children will use positional words to describe the placement of real-world shapes. Understanding and using positional words is an important part of developing children’s spatial sense. Knowledge of positional words is needed for clear, precise communication with others. People use positional or location words to tell where they are as they navigate the world. Following and giving directions require the use of positional words. Besides the everyday usefulness of knowing positional words, children will later use them in mathematics as they study data, work with distance and direction, and learn about coordinate graphing.	 <p>Tip Top</p>  <p>Think Outside the Box</p> <p>Real world objects shaped like cones, cubes, spheres, and cylinders</p>	Above, below, beside, next to, in front of, behind	To get students thinking about positional words, arrange 2 students and have the rest of the class describe their position using a sentence frame. For example, Eloisa is <i>next to</i> Melissa. Put students in different arrangements ending with the positional words you are introducing for that lesson. This is also a good time to match similar positional words with the lesson’s vocabulary. For example, on top and under may be used instead of above and below.		Set up a bookshelf or table with classroom objects shaped like cones, cubes, spheres, and cylinders. Have students complete the sentence frame “The ____ is (positional word) the ____.” Then have them explain to their partner how they know. For example, “I know the sphere is above the cone because the sphere is higher than the cone.”

Assessments:  
Go Math [Chapter 10 Test](#)  
Chapter 10 Performance Task: [Shape Safari](#)



**BIG IDEA:** The study of measurement at the kindergarten level will apply directly to students’ daily lives. Many children enter school already exposed to informal ideas about measurement. Experiences provided at this level will help children further develop concepts about what can be measured and how to measure it. Kindergartners will learn to describe measurable attributes of objects, such as length, weight, and height. Students will also compare objects and verbally describe the measurable attributes with words such as how tall, how wide, how heavy, and similar descriptive terms.

Adapted from Go Math: Teaching for Depth, pg. 465C

**Professional Development Videos**

[Measurement and Geometry, Grades K-2, Segment 1](#)

**Additional Quarter 4 Resources**

[Building Fluency Through Number Talks – Q4](#)

[Building Fluency Through Story Problems – Q4](#)

[Building Fluency Through Story Problems \(Spanish\) - Q4](#)

**ESSENTIAL QUESTION:** How can comparing objects help you measure them?

**STANDARDS:** K.MD.1, K.MD.2

**ELD STANDARDS:**

ELD.PI.K.1 - Exchanging information/ideas via oral communication and conversations.

ELD.PI.K.9 - Expressing information and ideas in oral presentations.

ELD.PI.K.3 - Offering opinions and negotiating with/persuading others.

ELD.PI.K.11 - Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.


ELD.PI.K.5 - Listening actively and asking/answering questions about what was heard.



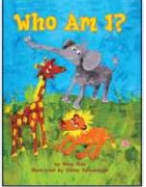
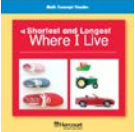

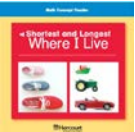
ELD.PI.K.12 - Selecting and applying varied and precise vocabulary.








**LITERACY CONNECTIONS:** [Go Math! Math Readers](#) - The actual books can be found in your Grab-and-Go Math Kits.

[Who Am I?](#) (pg. 30) - Children read the book and compare lengths.

[Shortest and Longest Where I Live](#) - Children read the book and compare the lengths of household objects.

Lessons	Focus	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools& Resources <a href="#">Go Math Teacher Resources GK</a>	Vocabulary	Connections (ENGAGE in Prior Knowledge)	Academic Language Support	Talk & Share
11.1 Hands On: Compare Lengths	Directly compare the lengths of two objects	<a href="#">K.MD.2</a>  Companion pg. 125  <a href="#">MP 3</a> <a href="#">MP 5</a> <a href="#">MP 6</a>	How can you compare the lengths of two objects?	Measurement is widely used in everyday life. Children and their families often refer to measurement ideas, such as how many children have grown, the lengths of walks they take, how heavy bags of groceries are, and how high buildings are. Measurement ideas are used in the classroom, too. Children decide whether items will fit in their backpacks or not; they put large blocks on certain shelves and smaller blocks on others; and they see that one train of cubes is longer than another. Measurement bridges two other important areas of mathematics—geometry and number sense. Children have compared numbers, shapes, and lengths of sides. In this chapter, they will compare lengths, heights, and weights.	<a href="#">Go Math! Grab and Go Kit</a> This link provides an overview on how to utilize this in the classroom.  <a href="#">Long and Short</a>   <a href="#">Connecting Cube Challenge</a>	Longer, same length, shorter	In groups have students look at a collection of objects with different lengths. For example, a plastic bag containing a pencil, crayon, marker, eraser, and paperclip. In groups have students put them in order from smallest to biggest. Ask students how they decided which was the smallest? Which was the biggest? Are there	<b>ELD Standards</b> <ul style="list-style-type: none"> <li><a href="#">ELD Standards</a></li> <li><a href="#">ELA/ELD Framework</a></li> <li><a href="#">ELPD Framework</a></li> <li><a href="#">ELL Math Instruction Framework</a></li> </ul> <b>Access Strategies</b> <ul style="list-style-type: none"> <li><a href="#">Organizing Learning for Student Access to Challenging Content</a></li> </ul>	Have each student find a classroom object that is shorter than their pencil. Have them draw both objects, one under the other to check. Have each child share in partners or groups how they know their pencil is longer than their object. They can use the sentence frame, “I know my pencil is longer than the ___ because

							any objects that are the same size? Have them share using the sentence frame, "The ___ is smaller/bigger than the ___ because ___."	<ul style="list-style-type: none"> <li>• <a href="#">Student Engagement Strategies</a></li> <li>• <a href="#">Problem Solving Steps and Approaches</a></li> </ul>	____, or I know the ____ is shorter than my pencil because _____.
11.2 Hands On: Compare Heights	Directly compare the heights of two objects	<a href="#">K.MD.2</a> Companion pg. 125  <a href="#">MP 3</a> <a href="#">MP 5</a> <a href="#">MP 6</a>	How can you compare the heights of two objects?	"How is height different from length?" The answer to this question is more a matter of language than mathematics. Both length and height answer the question, "What is the distance from one point to another?" You might tell children that length is often used to answer, "How long?" while height is used to answer, "How tall?" The lessons include measuring rules that show what is supposed to be measured or compared. Point to some classroom objects and indicate with your hands the distance you want children to think about.	<a href="#">Ups and Downs!</a>   Linker cubes	Same height, taller, shorter	Ask students to tell you what they know about length. Have students of different heights line up in front of the classroom and have students put them in order by length. Have them talk in pairs and tell how they know one student is longer/taller than another. This is a good way to introduce them to height. The difference between height and length is more a matter of language than math since they both measure the distance from one point to another.	<ul style="list-style-type: none"> <li>• <a href="#">Accountable Talk Simply Stated</a></li> <li>• <a href="#">Equitable Talk Conversation Prompts</a></li> <li>• <a href="#">Accountable Talk Posters</a></li> <li>• <a href="#">Five Talk Moves Bookmark</a></li> <li>• <a href="#">Effective Math Talks</a></li> </ul> <p><b>Cooperative Learning</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cooperative Learning Role Cards</a></li> <li>• <a href="#">Collaborative Learning Table Mats</a></li> <li>• <a href="#">Seating Chart Suggestions</a></li> </ul> <p><b>Literacy Connections:</b></p> <p><a href="#">Who am I?</a> (pg. 30)</p> 	Have each student think of an object that is taller than they are. Have them draw a picture of themselves next to the object. Have each child share in partners or groups how they know they are shorter than their object. They can use the sentence frame, "I know I am shorter than the ____ because _____, or I know the ____ is taller than me because _____.
11.3 Problem Solving: Direct Comparison	Solve problems by using the strategy <i>draw a picture</i>	<a href="#">K.MD.2</a> Companion pg. 125  <a href="#">MP 1</a> <a href="#">MP 3</a> <a href="#">MP 6</a>	How can you solve problems using the strategy <i>draw a picture</i> ?	In this lesson, children will be asked to use direct comparison to compare lengths and heights of two objects. They need to analyze what they are being asked and make a plan to solve the problem. When using direct comparison to compare two objects, children should understand the objects must both be placed at the same starting point whether they are placed horizontally or vertically to compare length or height. Children need to conceptualize the problem by using actual objects or pictures. Once children have reached an answer, they should ask themselves if their answer makes sense.	<a href="#">Shortest and Longest Where I Live</a>   <a href="#">An Order to Go!</a> 	Longer, same height, shorter, taller	Distribute connecting cubes to partners. Each partner should get a different color. Have each child work in secret to build a tower. Then ask a series of questions to help them compare the two towers. How can you compare the heights of the two towers? Why is it important to stand the towers on the same, flat place, such as a	<p><a href="#">Shortest and Longest Where I Live</a></p> 	Have students identify two small classroom objects to compare, such as pencils, crayons, erasers, or chalk. In pairs have them tell their partner how they should place the objects in order to compare them. Have them draw the objects and use the words <i>longer than, shorter than, or about the same length</i> to

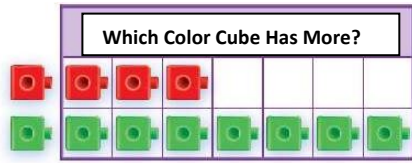
					<a href="#">Connecting Cube Challenge</a> 		desk? Which tower is taller/shorter? Have children repeat the activity with towers of different heights or have them lay their tower horizontally to compare lengths.	<a href="#">Curious George and the Mystery Boxes</a> (pg. 28)  <b>Model and Discuss</b>  Lengths of real world objects	describe the objects in their drawings.
11.4 Hands On: Compare Weights	Directly compare the weights of two objects	<a href="#">K.MD.2</a> Companion pg. 125  <a href="#">MP 3</a> <a href="#">MP 5</a> <a href="#">MP 6</a>	How can you compare the weights of two objects?	In this lesson, children hold classroom objects in their hands to compare the weights. They use the words <i>heavier</i> and <i>lighter</i> as they make decisions comparing the weights of the objects. Why use real objects? To clarify the weight concept, children must experience it. They must hold objects—ones with discernable difference in weight—in their hands to judge the relative weights. Later, children will develop enough background knowledge to be able to look at pictures of familiar objects and compare their weights.	<a href="#">Connecting Cube Challenge</a>   Real world objects of various weights	Heavier, lighter, same weight	Pass around 2 books of different size and weight. The more drastic the weight difference the better. Ask students how they can compare the 2 books. Guide students into thinking about comparing weight.	  Compare heights and weights of different animals	In partners or groups ask students how they can compare the weight of their table with the weight of their chair. Have them use the sentence frame, "I know the ___ is heavier/lighter than the ___ because ___".
11.5 Length, Height, and Weight	Describe several measurable attributes of a single object	<a href="#">K.MD.1</a> Companion pg. 124  <a href="#">MP 1</a> <a href="#">MP 3</a> <a href="#">MP 6</a>	How can you describe several ways to measure one object?	Children have been learning about different ways to compare objects. They have used different measuring techniques to measure different attributes. By now they should realize that objects can be measured in different ways. Children should understand that a single object can have measurements of height, length, and weight. In this lesson, children will measure to find the length or height of an object. They will also discuss measuring objects by weight. These skills build the foundation for using units of measure in later grades and in real life to measure objects by inches, centimeters, ounces, or pounds.	<a href="#">Linker Cubes Ups and Downs!</a>   <a href="#">Connecting Cube Challenge</a>   <a href="#">Measurements</a> 	Heavier, lighter, longer, shorter, taller	Guide students to think about the properties of objects. Ask the following questions: <ul style="list-style-type: none"> <li>• What is <i>length</i>?</li> <li>• What is <i>height</i>?</li> <li>• What is <i>weight</i>?</li> </ul> Choose a classroom object and have students tell about its length, height, or weight		Put students in groups of 3. Give each group of students a different object. Have each group draw their object and then have each student describe a different way to measure their object. Students can use the sentence frame, "I can measure the <u>(length/height/weight)</u> of <u>(their object)</u> by _____".

Assessments:

Go Math [Chapter 11 Test](#)

Go Math Chapter 11 Performance Task: [Weight, Length, and Height](#)

**BIG IDEA:** Children’s engagement in the data display process should begin by asking a question, creating a recording procedure, and finally summarizing and analyzing the data they collected to answer the question (Schwartz & Whitin, 2006). Clements and Sarama (2009) offer a number of specific instructional strategies to help children develop deeper understanding of the data display process. Before creating



a pictograph, children should have an opportunity to use physical objects and then manipulatives, such as connecting cubes, to make graphs. Initially, the gathering of data and graphing should be a group experience and then proceed to an independent activity. In analyzing their displays, children often focus on the individuals in the data display and do not think about the data as a whole and should be encouraged to make statements about the data as a whole. Having children explain their reasoning about why objects do not belong to a particular group helps children deepen their understanding. Children should have extensive opportunities to develop language needed to sort and classify objects. They should be able to successfully sort using their own criteria (one or more attributes), and explain to others how they made their decisions. Students often sort collections of objects based on attributes other than those provided by the teacher and they cannot sort collections of objects on attributes they cannot distinguish. Children who struggle to make data displays often do so because they have difficulty sorting data (NRC, 2001).

Adapted from Go Math: Teaching for Depth, pg. 493C

**Professional Development Videos**

[Measurement and Geometry, Grades K-2, Segment 1](#)

**Additional Quarter 4 Resources**

[Building Fluency Through Number Talks – Q4](#)

[Building Fluency Through Story Problems – Q4](#)

[Building Fluency Through Story Problems \(Spanish\) - Q4](#)

**ESSENTIAL QUESTION:** How does sorting help you display information?

**STANDARDS:** K.MD.3

**ELD STANDARDS:**

ELD.PI.K.1 - Exchanging information/ideas via oral communication and conversations.

ELD.PI.K.9 - Expressing information and ideas in oral presentations.

ELD.PI.K.3 - Offering opinions and negotiating with/persuading others.

ELD.PI.K.11- Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.

ELD.PI.K.5 - Listening actively and asking/answering questions about what was heard.

ELD.PI.K.12 - Selecting and applying varied and precise vocabulary.

**LITERACY CONNECTIONS:** [Go Math! Math Readers](#) - The actual books can be found in your Grab-and-Go Math Kits.



[Hippo and Fox Sort Socks](#) (pg. 27) - Children read the book and learn about sorting and classifying socks in different categories.

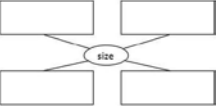

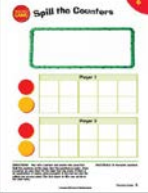
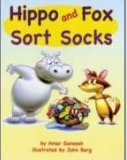
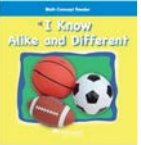

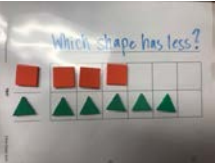
[I Know Alike and Different](#) - Children read the book and identify pictures that are alike and pictures that are different.

[I Know Big and Small](#) - Children read the book and identify big and small objects.

[Shells! Shells!](#) (pg. 25) - Children read the book and construct a graph to show the number of large and small shells.

Lessons	Focus	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools& Resources <a href="#">Go Math Teacher Resources GK</a>	Vocabulary	Connections (ENGAGE in Prior Knowledge)	Academic Language Support	Talk & Share
12.1 Hands On: Algebra – Classify and Count by Color	Classify and count objects by color, shape, and size	<a href="#">K.MD.3</a> Companion pg. 127  <a href="#">MP 2</a> <a href="#">MP 5</a> <a href="#">MP 6</a>	How can you classify and count objects by color?	Kindergarten students need many experiences with sorting and classifying objects into different categories, such as by color, shape, or size to learn to make sense of real life data. They will use this knowledge when exploring graphing later. Provide children with many opportunities to sort and classify throughout the day. For example, have them line up for lunch or recess by the color of their shirts or	<a href="#">Go Math! Grab and Go Kit</a> This link provides an overview on how to utilize this in the classroom  <a href="#">Mix and Match</a>	category, classify, color, blue, green, red, yellow, shape, big, size, small,	Give groups of students a collection of shapes of different colors, shapes, and sizes. Have each group sort their shapes any way they like. Have groups walk around to see how other groups sorted. Ask students	<b>ELD Standards</b> • <a href="#">ELD Standards</a> • <a href="#">ELA/ELD Framework</a> • <a href="#">ELPD Framework</a>	Have students look at a group of objects that they have sorted. Ask students, “How can you classify and count objects by ____?” Students should explain their thinking on how they
12.2 Hands On: Algebra –			How can you classify and						

<p>Classify and Count by Shape</p> <p>12.3 Hands On: Algebra – Classify and Count by Size</p>			<p>count objects by shape?</p> <p>How can you classify and count objects by size?</p>	<p>pants. It may help some children to say the name of the color of each manipulative placing it in a color set. Children should also use two-dimensional shapes to sort and classify by shape. These manipulatives help children easily see how shapes are alike and different. With two-dimensional shapes, children can clearly identify the distinguishing features of a triangle, square, rectangle, and circle. As children sort and classify, encourage them to use models of two-dimensional shapes to name shapes and discuss the attributes of shapes. You can also deepen and enhance children’s understanding of size words with activities such as these:</p> <ul style="list-style-type: none"> <li>• Involve children in creative movements to crouch down and be very small, and then rise and grow bigger and bigger with outstretched arms.</li> <li>• Focus on sizes as you share favorite old stories, such as <i>The Three Bears</i> and <i>Jack and the Beanstalk</i>. These stories also provide opportunities to review position words, such as <i>above</i> and <i>below</i>.</li> <li>• Work with students to make a list of words that describe size. Words that describe things that are big might be <i>giant</i>, <i>huge</i>, <i>large</i>, or <i>gigantic</i>. Words such as <i>tiny</i>, <i>little</i>, <i>petite</i>, or <i>teensy-weensy</i> might be words that children know for <i>small</i>.</li> </ul>	 <p>2-D Shapes of different colors and sizes</p>		<p>to guess how they think that particular group sorted their shapes. They can use the sentence frame, “I think this group sorted by ____, because ____.” That group can then explain if they are right or wrong and why.</p>	<ul style="list-style-type: none"> <li>• <a href="#">ELL Math Instruction Framework</a></li> </ul> <p><b>Access Strategies</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Organizing Learning for Student Access to Challenging Content</a></li> <li>• <a href="#">Student Engagement Strategies</a></li> <li>• <a href="#">Problem Solving Steps and Approaches</a></li> </ul> <p><b>Equitable Talk</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Accountable Talk Simply Stated</a></li> <li>• <a href="#">Equitable Talk Conversation Prompts</a></li> <li>• <a href="#">Accountable Talk Posters</a></li> <li>• <a href="#">Five Talk Moves Bookmark</a></li> <li>• <a href="#">Effective Math Talks</a></li> </ul> <p><b>Cooperative Learning</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cooperative Learning Role Cards</a></li> <li>• <a href="#">Collaborative Learning Table Mats</a></li> <li>• <a href="#">Seating Chart Suggestions</a></li> </ul> <p><b>Vocabulary Strategy:</b> Have students complete the Semantic Map graphic organizer. The organizer should include a definition, an illustration, an example, and non-example</p>	<p>placed their objects in each category and how many they had in each category.</p>
<p>12.4 Hands On: Make a Concrete Graph</p>	<p>Make a graph to count objects that have been classified into categories</p>	<p><a href="#">K.MD.3</a></p> <p>Companion pg. 127</p> <p><a href="#">MP 2</a></p> <p><a href="#">MP 6</a></p> <p><a href="#">MP 8</a></p>	<p>How can you make a graph to count objects that have been classified into categories?</p>	<p>Constructing concrete graphs is an excellent way to connect the child’s world with numbers. Having children construct their own graphs helps them become personally involved with the data and helps them learn what information can be gathered from a graph. According to the National Research Council, in order to use data to answer questions, people first classify the data into different categories, display the classified data graphically, and describe or compare the categories. In this lesson, children sort and classify objects by color and shape, complete graphs to show the categories, and then count, write, and talk about the results of their graphs.</p>	<p>Linker Cubes 2-D Shapes</p> <p><a href="#">Get a Graph</a></p>  <p><a href="#">2-Row Graph</a> <a href="#">3-Row Graph</a></p>	<p>Graph, category, classify</p>	<p>Distribute foam or paper shapes in two colors to partners. Have partners sort by color and talk about what they did. Then have students place their shapes in two rows with one color on top and one color on the bottom. Ask students how does this help you see which group has more?</p>	<p><a href="#">Cooperative Learning Role Cards</a></p> <p><a href="#">Collaborative Learning Table Mats</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Seating Chart Suggestions</a></li> </ul> <p><b>Vocabulary Strategy:</b> Have students complete the Semantic Map graphic organizer. The organizer should include a definition, an illustration, an example, and non-example</p>	<p>In pairs or groups give students a bag of objects to categorize by either color, shape, or size. (Use real world objects where you can. For example, Wheat Thins and Ritz Crackers that can be sorted by shape.) Have students create a graph of their objects and count how many are in each category. Have each group present to the class and tell how they created their graph and</p>

					Real world objects to classify by color, shape, or size. For example, Wheat Thins, Ritz Crackers, Cheez-Its, Cheerios, Post-Its, stickers, etc.				how many of each object they have.
12.5 Read a Graph	Read a graph to count objects that have been classified into categories	<a href="#">K.MD.3</a> Companion pg. 127 <a href="#">MP 2</a> <a href="#">MP 6</a> <a href="#">MP 8</a>	How can you read a graph to count objects that have been classified into categories?	Learning to make and read concrete graphs is an important mathematical skill. Children need much practice at the concrete level in order to better understand more abstract graphs that they will learn about in later grades. In this lesson, children read graphs to find how many counters are in each row and then write the numbers. They compare the numbers and tell which color counter there is more or fewer of on the graph. According to the National Research Council, it is important as children are graphing that they communicate their actions and thoughts. Encourage them to talk about the graphing using comparison language, such as <i>more</i> and <i>fewer</i> . It is important that they describe how they find their answers.	Linker cubes Counters <a href="#">2-Row Graph</a> <a href="#">3-Row Graph</a> <a href="#">Sort and Graph</a>  <a href="#">Spill the Counters</a> 	Category, classify, graph	Put connecting cubes (6 each of 3 colors per pair of students) in a paper bag. Have partners shake the bag to mix up the cubes. Then have each child take out a handful of cubes and lay them on a table. Have partners work together to sort, count, and draw their cubes on a 3-Row Graph. Ask students, “How many ___ are there?” for each color. Ask students to explain how they found their answers. Keep the graphs to use at the end of the lesson.  <i>This can also be done with real world objects (beans, pasta, buttons).</i>	<b>Literacy Connections:</b> <a href="#">Hippo and Fox Sort Socks</a> (pg. 27)  <a href="#">Shells! Shells!</a> (pg. 25) Children read the book and construct a graph to show the number of large and small shells  <a href="#">I Know Alike and Different</a>  <a href="#">I Know Big and Small</a>  <b>Model and Discuss</b> 	Choose a few of the graphs from the beginning of the lesson and hand one to each group. In groups, have students answer the following questions: <ul style="list-style-type: none"> <li>• What are the categories for this graph?</li> <li>• How many objects are there in each category?</li> <li>• How do you know?</li> </ul>

Assessments:

Go Math [Chapter 12 Assessment](#)

Go Math Chapter 12 Performance Task: [Sorting Fruit and Shapes](#)

\*\*Common Assignment Critical Area Measurement and Data: [Comparing and Sorting](#)