

Grade K

Unit 4.5	Unit Title Comparing and Composing Shapes	Lesson 1 of 3	Day 1 - 4
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Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
<p>K.G.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, vertices/”corners”) and other attributes (e.g. having sides of equal lengths).</p> <p>See Vocabulary for shapes</p>	<ul style="list-style-type: none"> •Analyze and compare two-and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes. •Know and use the informal names of the attributes of 2-D and 3-D shapes to analyze and compare. 	<p>SMP4 Model with mathematics. SMP7 Look for and make use of structure.</p>	<ul style="list-style-type: none"> •How would you compare these two shapes _____ ? •How would you describe a cylinder, etc ? •Can you describe this shape (polygon) by telling me how many sides or vertices “corners” it has? •How can you use the words alike and different to compare two 2-D shapes by their attributes?
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
<ul style="list-style-type: none"> •Identify a circle, square, rectangle, triangle, and hexagon. •Identify a cone, cylinder, and sphere. •Recognize the difference between 2-D and 3-D shapes. 	<p>Sides, Straight or curved Vertices “corners” Squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, spheres</p>	<p>Knowing and understanding the vocabulary.</p>	<p>OnCore Lessons 93 – 98 Student pages 185 – 196 Investigations Unit 5 INV 1 Session 1.1 – 1.3, 3.1 – 3.3, 3.5 Student page 45-48 K-5 Math Resources <i>Shapes, Shapes, Shapes</i> <i>Book template</i></p>

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
<p>Teachers will guide students to analyze and compare 2-D and 3-D shapes (see shapes listed under vocabulary) in different sizes and orientations, using informal language to describe their similarities and differences. They will utilize the OnCore Lessons 93 – 98, Investigations Unit 5 and if time the K-5 Math Resource to help students master this standard.</p>	<p>Students will analyze and compare 2-D and 3-D shapes (listed in the vocabulary section) in different sizes and orientations. They will use informal language in their descriptions of their similarities and differences. Students will practice this standard using OnCore student pages 185-196, Investigations 45 – 48 and the K-5 Math Resource.</p>

Grade K			
Unit	Unit Title	Lesson	Day
4.5	Comparing and Composing Shapes	2 of 3	5 - 7
Lesson Focus			
1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
K.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes .	<ul style="list-style-type: none"> •Model shapes in the world by drawing. Use a ruler for straight sides. •Explain how you drew or build a particular shape. •Build shapes in the world using components like sticks and clay. 	SMP4 Model with mathematics. SMP7 Look for and make use of structure.	<ul style="list-style-type: none"> •How do you use objects to build models of real-world shapes? •What steps do you take to draw a particular shape? Using these materials how can you create a ____ ?
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Model shapes by building using components like sticks and clay.	Sides, Straight or curved Vertices “corners” Squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, spheres		Investigations Unit 5 Session 1.4 - 1.6, 2.1, 3.4 Worksheet: www.superteacherworksheets.com <i>Shapes</i> <i>Triangles</i> www.mathworksheetsland.com <i>Shapes in the Big Apple</i>
Instruction			
9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)		
Teachers will guide students to model shapes in the world by drawing and using components like sticks and clay to build them. Drawing and tracing may be difficult for some Kindergarteners. A ruler or s straight edge that is shorter than 12 inches may be helpful to keep their lines straight. Circles are even difficult for adults to draw, so tracing circles is the best way to begin. There are additional worksheets on the “super teacher” site but you need to pay a small fee to become a member. Geoboard’s may also be used to construct shapes.	Students will model and build shapes in the world by drawing and using components like sticks and clay. Most students will start by tracing shapes before they move to drawing the shapes free hand. Students should use a ruler (or straight edge) to keep sides straight and trace coins or circular objects to draw circles. Even adults have difficulty drawing a perfect circle! Geoboard’s may also be used to construct a shape. They will practice their drawing using Investigations and other additional worksheets provided by their teacher.		

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Grade K			
Unit	Unit Title	Lesson	Day
4.5	Comparing and Composing Shapes	3 of 3	8 - 10
Lesson Focus			
1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
K.G.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles, with full sides touching to make a rectangle?”	<ul style="list-style-type: none"> •Compose simple shapes to form larger shapes. •Solve problems by using the strategy <i>draw a picture</i>. •Compose shapes using pattern blocks. 	SMP4 Model with mathematics. SMP7 Look for and make use of structure.	<ul style="list-style-type: none"> •How can you create a trapezoid using triangles? •How do you make larger shapes by putting smaller shapes together?
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
<ul style="list-style-type: none"> •Identify and describe 2-D shapes. •Model shapes by building with components and drawing. 	Compose	Composing shapes without the full sides of shapes touching.	OnCore Lesson 101 & 102 Student pages 201 -204 Investigations Unit 5 Session 2.2 – 2.5, Session 3.6-3.7 Student pages 49 – 51 K-5 Math Resources Build a Hexagon Build a Block Worksheet: Forming New Shapes from Old
Instruction			
9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)		
Teachers will guide students to compose simple shapes to form larger shapes. They may model composing using pattern blocks, geoboards, or drawing. Teachers need to stress to students that full sides of shapes (NOT HALF OR JUST THE VERTEX) must touch in order to compose a new shape. Teachers will use the OnCore lessons 101 & 102, Investigations Unit 5, K-5 Math Resources or the additional worksheet that was provided to help students practice this standard.	Students will compose simple shapes to form larger shapes. They will model composing using pattern blocks, geoboards, or drawings. Students will understand that in order to compose a shape the two smaller shapes must have a full side touching. They will practice this standard using the materials provided by their teacher.		

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