Math 1 (CC)

Math 1 (CC) Grade 1 | Mathematics | Common Core | 2013-2014

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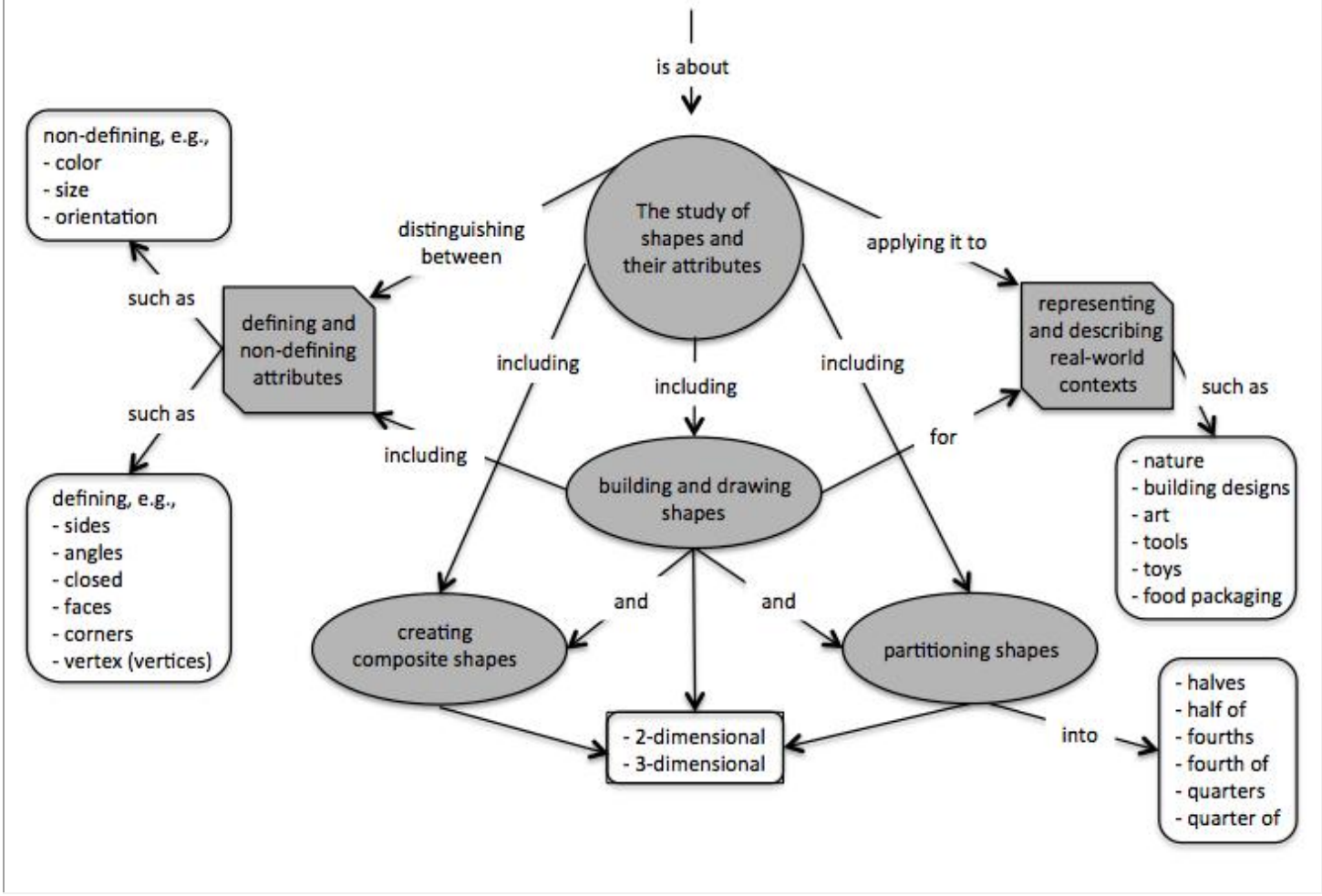
Unit: 6 - Geometric Shapes, Patterns & Attributes (Week 25, 5 Weeks)

Common Core Initiative

Overarching Questions and Enduring Understandings

Why are shapes important in our lives?

Graphic Organizer



Unit Abstract

In first grade students continue to need many opportunities to explore geometry concepts. They draw, build, and talk while making connections to real-world application of shapes. They learn to distinguish between which attributes define a shape, e.g., sides, corners (i.e., what makes a square a square) and which attributes may describe it, but do not define it, e.g., size, color, orientation. They experience that different orientations of a shape do not make it a different shape. They explore triangles to see that they can take many different forms depending on the length of the sides. Students build an understanding of part-whole relationships by combining shapes to form composite shapes and by partitioning shapes into equal shares. Integral to all of these experiences are discussions that reveal students' reasoning and the use of precise mathematical language.

Unit Overview (Word)

Unit Overview (PDF)

Content Expectations/Standards	Unit Level Standards
Grade 1, Geometry **1.G.A. Reason with shapes and their attributes.** • 1.G.A.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes. • 1.G.A.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. Students do not need to learn formal names such as "right rectangular prism." • 1.G.A.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	

Essential/Focus Questions	Key Concepts
1. What are the attributes of various closed shapes? 2. What are the attributes of various three-dimensional shapes? 3. What shapes can you make by composing or decomposing squares, triangles, rectangles, trapezoids, hexagons and circles? 4. How are 2-dimensional and 3-dimensional shapes alike and how are they different? 5. How can you share a sandwich (with square bread) with a friend so that you will both have the same amount?	2-dimensional shapes 3-dimensional shapes angle base closed figure composite shape congruence corner defining attributes face fourths halves non-defining attributes partition polygon quarters shape side vertex whole

Assessment Tasks	Intellectual Processes
Assessment Overview Pattern Block Triangles assessment task Pattern Block Hexagon Task Comparing Shapes Worksheet Venn Diagram_#1_blank Venn Diagram_#2_lines	**Standards for Mathematical Practice** ***Students will have opportunities to:*** • **attend to precision** when describing attributes of a shape; • **construct viable arguments and critique the reasoning of others** when justifying a claim about a shape; • **look for and express regularity in repeated**

Venn Diagram_#3_lines_square-traingle Professional Learning Task - Student Work Samples	**reasoning** when recognizing that the name of the shape remains the same, regardless of its size, its orientation and what other shapes have been combined in order to create it; • **look for and make use of structure** when identifying a shape as defined by its attributes; and • **model with mathematics** when composing and partitioning shapes.

Lesson Sequence	Resources
Lesson Overview Lesson Vocabulary for Word Wall Building to Six #1 Building to Six #2 Pattern Block Shapes_hexagons Pattern Block Shapes_trapezoids Pattern Block Shapes_blue rhombi Pattern Block Shapes_triangles Pattern Block Shapes_tan rhombi Pattern Block Shapes_squares Demonstration Pattern Block_hexagon Demonstration Pattern Block_trapezoid Demonstration Pattern Block_blue rhombus Demonstration Pattern Block_triangle Demonstration Pattern Block_tan rhombus Demonstration Pattern Block_square Professional Learning Task - Video Student Thinking	Unit Resources Artifact –Student Work Samples: Exploring Shapes Unit Activity Possible Shape Attribute Activity

« Previous Year

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