



Grade K - Unit D - Shaping Up

Unit Focus

Students begin to examine, identify, compare, and sort two-dimensional and three-dimensional shapes. They explore largely through play, how to describe the world around them using geometry terms. Attributes are realized through careful analysis as students notice how some are helpful in defining the geometry of a shape, while others are not. They will construct and deconstruct a variety of shapes in order to build both realistic and imagined objects.

Stage 1: Desired Results - Key Understandings

Standard(s)	Transfer		
Standards - Common Core <i>Mathematics: K</i> - Compare numbers. - 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. (CCSS.MATH.CONTENT.K.CC.C.6) - Understand addition, and understand subtraction. - Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). (CCSS.MATH.CONTENT.K.OA.A.3) - Classify objects and count the number of objects in each category. - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (CCSS.MATH.CONTENT.K.MD.B.3) - Identify and describe shapes. - 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. (CCSS.MATH.CONTENT.K.G.A.1) - Correctly name shapes regardless of their orientations or overall size. (CCSS.MATH.CONTENT.K.G.A.2) - Analyze, compare, create, and compose shapes. - 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). (CCSS.MATH.CONTENT.K.G.B.4) - Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. (CCSS.MATH.CONTENT.K.G.B.5)	<i>Students will be able to independently use their learning to...</i> T1 Apply knowledge of shapes and their attributes to create a product. T2 Examine, identify, compare and sort two-dimensional and three-dimensional shapes. T3 Identify and generalize patterns and structure in numbers, expressions, data and objects.		
	Meaning		
	Understanding(s)	Essential Question(s)	
	<i>Students will understand that...</i> U1 Shapes can be named, described, sorted, and compared by a variety of attributes U2 Shapes exist everywhere and help to describe our world U3 Mathematicians see patterns to make generalizations about structures and relationships.	<i>Students will keep considering...</i> Q1 Why do we classify geometric shapes and objects? Q2 How do shapes help me explain the world around me? Q3 What generalizations can be made from this pattern?	
	Acquisition of Knowledge and Skill		
	Knowledge	Skill(s)	
<i>Students will know...</i> K1 How to identify a particular shape regardless of orientation or size K2 How to compare various two- dimensional shapes K3 Defining vs. non-defining attributes	<i>Students will be skilled at...</i> S1 Identifying and locating circles, squares, rectangles, triangles, rhombus, trapezoid, hexagon S2 Identifying shapes as two-dimensional or three-dimensional.		

Stage 1: Desired Results - Key Understandings

- Compose simple shapes to form larger shapes. For example, Can you join these two triangles with full sides touching to make a rectangle?
(*CCSS.MATH.CONTENT.K.G.B.6*)
- Mathematical Practices
- Model with mathematics. (*CCSS.MATH.MP.4*)
- Look for and make use of structure. (*CCSS.MATH.MP.7*)

Madison Public Schools Profile of a Graduate

- Analyzing: Examining information/data/evidence from multiple sources to identify possible underlying assumptions, patterns, and relationships in order to make inferences. (*POG.1.2*)
- Product Creation: Effectively use a medium to communicate important information. (*POG.3.2*)

K4 How to describe, compare and locate shapes in their environment

K5 How to compare two-dimensional to three-dimensional shapes

K6 Vocabulary: add(ition), attribute, circle, compare, cone, color, cube, curved, cylinder, edge, flat, graph, greater than, hexagon, least, less/less than, most, more, one, pyramid, rectangle, rectangular prism, rhombus, round, shape, side, size, solid, sort, sphere, square, straight, surface, trapezoid, three-dimensional shape (3-D), trapezoid, triangle, triangular prism, two-dimensional shape (2-D), vertex or corner

S3 Drawing circles, squares, rectangles and triangles.

S4 Sorting and describing attributes of two-dimensional shapes and three-dimensional shapes.