Mathematics Curriculum

Topic A
Two-Dimensional Flat Shapes

K.G.1, K.G.2, K.G.4, K.MD.3

Focus Standard:	K.G.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*.
	K.G.2	Correctly name shapes regardless of their orientations or overall size.
	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 and vertices/"corners") and other attributes (e.g., having sides of equal length).
Instructional Days:	5	
Coherence -Links from:	GPK–M2	Two-Dimensional and Three-Dimensional Shapes
-Links to:	G1–M5	Identifying, Composing, and Partitioning Shapes

Students began the year, in Module 1, developing number concepts by observing their world. Now, they begin to develop spatial reasoning and geometric concepts by experiencing flat and solid shapes in their world. This module examines how shapes and objects are similar to or different from one another with respect to orientation and relative positions to objects.

In Lesson 1, students use the informal language of their everyday world to name and describe flat shapes without yet expressing mathematical concepts or using the vocabulary of geometry. At this point, students are not yet able to consistently distinguish between examples and non-examples of different groups of shapes such as triangles, circles, squares, rectangles, or hexagons. At this stage, a figure is a square because it looks like a book; another figure is a circle because it is round like the wheel of a car. Students make these observations without explicitly thinking about the attributes or properties of squares or circles.

In Lesson 2, students build on their experiential learning by relating it to the mathematical concepts and vocabulary of geometry, allowing them to enhance their experiences of shapes. Students begin to classify three-sided shapes by identifying them as examples of a triangle. Using various examples and non-examples of triangles, they sort and classify different shapes as examples of a triangle or not a triangle. Having learned to identify shapes as triangles, they explain their decisions about classifying some shapes as triangles and other shapes as not triangles by focusing on common attributes or properties of the shapes they have identified as triangles.

Lessons 3 and 4 continue the work of Lesson 2 in the same vein by identifying shapes as rectangles, hexagons, or circles. In Lesson 5, students communicate about the relative position of shapes by using terms such as above, below, next to, beside, in front of, and behind.

A Teaching Sequence Towards Mastery of Two-Dimensional Flat Shapes
Objective 1: Find and describe flat triangles, squares, rectangles, hexagons, and circles using informal language without naming. (Lesson 1)
Objective 2: Explain decisions about classifications of triangles into categories using variants and non-examples. Identify shapes as triangles. (Lesson 2)
Objective 3: Explain decisions about classifications of rectangles into categories using variants and non-examples. Identify shapes as rectangles. (Lesson 3)
Objective 4: Explain decisions about classifications of hexagons, and circles and identify them by name. Make observations using variants and non-examples. (Lesson 4)
Objective 5: Describe and communicate positions of all flat shapes using the words *above, below, beside, in front of, next to,* and *behind*. (Lesson 5)