Topic B

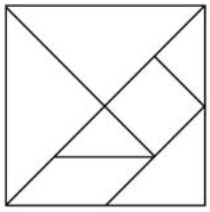
Composite Shapes and Fraction Concepts

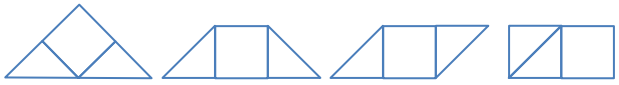
2.G.3, 2.G.1

Focus Standard:		2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves, thirds, half of, a third of,* etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
Instructional Days:		3	
Coherence	**-Links from:**	G1–M5	Identifying, Composing, and Partitioning Shapes
	-Links to:	G3–M7	Geometry and Measurement Word Problems

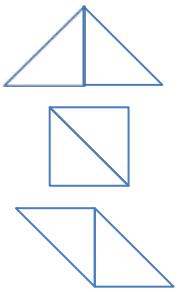
In Topic B, students build and partition composite shapes, exploring fraction concepts as they identify the relationships between parts and wholes.

Students see in Lesson 6 that the tangram puzzle (shown on the right) is composed of many smaller two-dimensional shapes. As students cut out the various shapes within the tangram, they name them. They explore the variety of ways they can compose new shapes by repositioning the pieces. For example, students see that a larger triangle can be composed of two right triangles and a square, which can also be repositioned to form a trapezoid, parallelogram, or rectangle (as shown below). Further, students see that the composite triangle pictured below can be placed next to another triangle to form a larger square.





In Lesson 7, students interpret equal shares within composite shapes. They begin by using the tangram pieces from the previous day to show how the two smallest triangles can be positioned to form a larger triangle, parallelogram, or square (as shown on the right). Each of these composite shapes is composed of two equal shares, described as halves. By the end of Lesson 7, students experiment with pattern blocks to see, for example, how three triangle blocks can be combined to form a trapezoid.



Thus, the trapezoid can be partitioned into three equal shares, with each share described as a third of the whole, as shown below (**2.G.3**).

In Lesson 8, students continue to use pattern blocks to build composite shapes from equal parts. For example, they see that a regular hexagon can be composed from two trapezoids, representing two equal shares, or halves. Alternatively, the hexagon can also be composed of three rhombuses (as shown below), described as thirds, or six same-size equilateral triangles. Students also use four square-inch tiles to compose a larger square and describe each part as a fourth (**2.G.3**).

A Teaching Sequence Toward Mastery of Composite Shapes and Fraction Concepts	
Objective 1:	**Combine shapes to create a composite shape; create a new shape from composite shapes. (Lesson 6)**
Objective 2:	**Interpret equal shares in composite shapes as halves, thirds, and fourths. (Lessons 7–8)**