



Topic D

Drawing, Analysis, and Classification of Two-Dimensional Shapes

5.G.3, 5.G.4

Focus Standards:	5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. <i>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i>
	5.G.4	Classify two-dimensional figures in a hierarchy based on properties.
Instructional Days:	6	
Coherence -Links from:	G3–M7	Geometry and Measurement Word Problems
	G4–M4	Angle Measure and Plane Figures
-Links to:	G6–M4	Expressions and Equations

In Topic D, students draw two-dimensional shapes to analyze their attributes and then use those attributes to classify them. Familiar figures, such as parallelograms, rhombuses, squares, and trapezoids, were defined in earlier grades. By Grade 4, students gained an understanding of shapes beyond the intuitive level. Grade 5 extends this understanding through an in-depth analysis of the properties and defining attributes of quadrilaterals.

Grade 4's work with the protractor is applied in this topic to construct various quadrilaterals. Using measurement tools illuminates the attributes used to define and recognize each quadrilateral (**5.G.3**). Students see, for example, that the same process they used to construct a parallelogram also produces a rectangle when all angles are constructed to measure 90° . Students then analyze defining attributes and create a hierarchical classification of quadrilaterals (**5.G.4**).

A Teaching Sequence Toward Mastery of Drawing, Analysis, and Classification of Two-Dimensional Shapes

- Objective 1:** Draw trapezoids to clarify their attributes, and define trapezoids based on those attributes.
(Lesson 16)
- Objective 2:** Draw parallelograms to clarify their attributes, and define parallelograms based on those attributes.
(Lesson 17)
- Objective 3:** Draw rectangles and rhombuses to clarify their attributes, and define rectangles and rhombuses based on those attributes.
(Lesson 18)
- Objective 4:** Draw kites and squares to clarify their attributes, and define kites and squares based on those attributes.
(Lesson 19)
- Objective 5:** Classify two-dimensional figures in a hierarchy based on properties.
(Lesson 20)
- Objective 6:** Draw and identify varied two-dimensional figures from given attributes.
(Lesson 21)