







Topic A

Attributes of Shapes

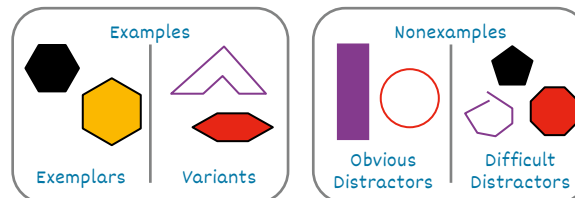
Students begin their grade 1 study of geometry by describing and classifying shapes. They analyze two-dimensional flat shapes to distinguish between defining and nondefining attributes (e.g., a shape having 3 straight sides can define a triangle, but a shape being green does not mean it is a triangle). Students count the number of sides on shapes to sort them into the categories of triangles, quadrilaterals, pentagons, and hexagons. They see that two shapes with the same number of sides that look different can still be given the same name.

					
Quadrilateral Rectangle 4 sides 4 square corners 2 pairs of parallel sides	Quadrilateral Rectangle Square 4 sides the same length 4 square corners 2 pairs of parallel sides	Quadrilateral Rhombus 4 sides the same length 4 corners 2 pairs of parallel sides	Quadrilateral Trapezoid 4 sides 4 corners 1 pair of parallel sides	Triangle 3 sides 3 corners	Hexagon 6 sides 6 corners


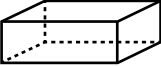
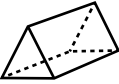



Students use other defining attributes like square corners, parallel sides, and side length to name, draw, describe, and sort triangles, rectangles, squares, rhombuses, trapezoids, and hexagons. Students may name shapes differently depending on whether they are looking at just the number of sides or they consider other attributes too. For example, any shape with 4 sides can be called a quadrilateral, but sometimes more specific names like rectangle, square, trapezoid, or rhombus can apply.

For each two-dimensional shape type, students see examples and nonexamples. Examples include variants, or atypical examples that may be unfamiliar to them. Nonexamples include distractors to help students clarify the attributes of a specific shape.

HEXAGONS



Students also analyze three-dimensional solid shapes, including cubes, cones, cylinders, rectangular prisms, triangular prisms, and pyramids. They reason about the flat shapes they see in unfolded nets and make predictions about which solid shape the nets will make when they are built. Students build the shapes to test their predictions. Through this work, students understand that they can recognize and describe solid shapes by looking at their faces. They also notice how a shape's attributes impact its functionality. They manipulate a variety of solid shapes to understand both how the shapes move and the functions they perform (e.g., rolling, stacking). Students relate these qualities to the shape's faces, edges, and corners.

	6 faces square faces	cube
	6 faces rectangle faces	rectangular prism
	5 faces triangle faces rectangle faces	triangular prism
	2 faces circle faces curved	cylinder
	1 circle face has a point curved	cone
	5 faces square face triangle faces	square pyramid