ELG 1.G.A Reason with shapes and their attributes.

Vertical Progression:

TS Gold	**21.** Explores and describes spatial relationships and shapes **2.** Matches two identical shapes **4.** Identifies a few basic shapes (circle, square, triangle) **6.** Describes basic two-and three-dimensional shapes by using own words; recognizes basic shapes when they are presented in a new orientation **8.** Shows that shapes remain the same when they are turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes
Kindergarten	**K.G.A Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).** o **K.G.A.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. o **K.G.A.2** Correctly name shapes regardless of their orientations or overall size. o **K.G.A.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). **K.G.B Analyze, compare, create, and compose shapes.** o **K.G.B.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). o **K.G.B.5** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. o **K.G.B.6** Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*
1st Grade	**1.G.A Reason with shapes and their attributes.** o **1.G.A.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. o **1.G.A.2** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. o **1.G.A.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves, fourths*, and *quarters*, and use the phrases *half of, fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.
2nd Grade	**2.G.A Reason with shapes and their attributes.** o **2.G.A.1** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. o **2.G.A.2** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. o **2.G.A.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.

ELG 1.G.A: Reason with shapes and their attributes.

Students will demonstrate command of the ELG by:

- Sorting and comparing shapes by their attributes.
- Drawing shapes to identify defining and non-defining attributes to build shapes.
- Using 2-D or 3-D shapes to create a composite shape.
- Making new shapes from the composite shapes, using pattern blocks or tangrams.
- Recognizing what shapes are used to make other shapes.
- Dividing circles into two and four equal shares or parts.
- Dividing rectangles into two and four equal shares or parts.
- Identifying half of a circle or rectangle.
- Identifying a fourth of a circle or rectangle.
- Identifying a quarter of a circle or rectangle.
- Dividing a half or a fourth of a circle or rectangle into smaller, equal shares.
- Describing the number of equal shares in a whole circle or rectangle using grade level academic and content language.

Vocabulary:

- angle
- attribute
- circle
- compare
- compose (build)
- composite shapes
- cone
- cube
- cylinder
- decompose
- equal shares
- face
- fourth(s)/fourth of
- half/halves/half of
- partition
- prism
- quarter(s)/quarter of
- rectangle
- rectangular prism
- rhombus
- square
- three-dimensional
- trapezoid
- triangle
- two-dimensional
- vertex

Sample Instructional/Assessment Tasks:

1) Standard(s): 1.G.A.1

Source: www.k-5mathteachingresources.com/1st-grade-geometry.html

Item Prompt: Comparing 2D Shapes

Instruct students to select two different two dimensional shapes and draw one on each side of the chart. Ask them to think about how the shapes are similar and how the shapes are different.

Next, provide them with this sentence frame:

A _____ is similar to a _____ because they both _____.
A blank is different to a _____ because_____.

2) Standard(s): 1.G.A.2

Source: www.k-5mathteachingresources.com/1st-grade-geometry.html

Item Prompt: Make a Hexagon

Materials: Pattern Blocks

Lead students through the following:
1) How many different ways can you put together shapes to make a hexagon?
2) Draw and write about how you put together shapes to make a hexagon. Use words from the Word Bank to help you.

Word Bank:
triangle
rhombus
trapezoid
hexagon

Writing could include: I put together 2 trapezoids to make a hexagon.

3) Standard(s): 1.G.A.3

Source: www.k-5mathteachingresources.com/1st-grade-geometry.html

Item Prompt: Fraction Pictures

Materials: paper circles, scissors, pencils and crayons

Lead students through the following:
1) Fold and cut a circle into two halves. Fold and cut another circle into four quarters.
2) Create a fraction picture using halves and quarters. Use markers or crayons to add details to your picture.
3) Describe what you made and the fractions you used.

Word Bank:	
fraction	
quarter	
half	
whole	
fourth	
halves	
equal pieces	I made _____
	I used _____