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| **Clarity for Learning**  |
| **Standard KY.6.G.1** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and quadrilaterals; apply these techniques in the context of solving real-world and mathematical problems.  |
| **Concepts (Nouns)**areatriangle/right trianglespecial quadrilateralspolygons | **Skills (Verbs)**composedecomposeapply |
| **Learning Progressions***Prerequisites:** Understand the concept of area is the number of square units needed to cover a space.
* Use a formula to find the area of a rectangle (Area = length x width).
* Multiply with fractions, decimals, and whole numbers.

*Grade level skills:** Find area using actual shapes (variety of triangles, quadrilaterals, polygons) by composing into rectangles or decomposing into triangles and quadrilaterals.
* Derive formula for the area of a parallelogram (decompose shape and rearrange parts to compose a rectangle).
* Derive the formula for the area of a triangle (decompose parallelogram into 2 triangles).
* Use the formulas for the area of parallelograms and triangles to solve problems.
* Find the areas of trapezoids and kites by decomposing them into rectangles, parallelograms and triangles.
* Compose and decompose complex polygons into familiar shapes. Add or subtract the areas of the shapes to determine the area of the polygon.
* Apply the ability to find areas of polygons to solve real-world problems.

*Clarifications:*Area of the listed shapes may be thought of as a rectangle with a larger area, subtracting the areas exterior to the actual shape to obtain the true area, or as a composite area of smaller triangles and rectangles which sum to the true area of the given shape. Students recognize given shapes can be combined to find the area or decomposed to find the area and one method may be more efficient than the other.KY.5.NF.4→KY.6.G.1→KY.7.G.6 |
| **Learning Intentions (I am learning to...)** | **Success Criteria (I know I’m successful when...)** |
| Derive formulas to find the areas of familiar shapes.Determine how the areas of other polygons can be found by breaking them down into familiar shapes. | * I can use what I know about areas of rectangles to find the area of parallelograms and rhombuses.
* I can determine the base and height of a triangle.
* I can find the area of triangles by using a formula.
* I can decompose trapezoids, kites, and other polygons into triangles, rectangles, and parallelograms.
* I can use the combined areas of triangles, rectangles, and parallelograms to determine the areas of trapezoids, kites, and other polygons.
* I can apply what I know about the area of polygons to solve real-world problems.
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