

Geometry

In second grade, children describe and analyze shapes. By creating and analyzing two- and three-dimensional shapes, children develop a foundation for understanding geometry concepts such as congruence, similarity, and symmetry, which are necessary for learning in later grades. At this level, children recognize and draw shapes having specified attributes, such as a given number of sides or angles, or equal faces. They identify and name triangles, quadrilaterals (squares, rectangles, and trapezoids), pentagons, hexagons, and cubes.

Children partition rectangles into rows and columns of same-size squares and count to find the total number of them. They answer questions, such as, “How many ways can a square be partitioned into fourths?” This standard is connected with using arrays to work on repeated addition (2.OA.4).

Children also partition circles and rectangles into two, three, or four equal shares (or regions), describe the shapes using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, or four fourths. They also learn that equal shares of identical wholes do not need to have the same shape.

The Grade 2 Common Core State Standards for Geometry specify that children should–

- Reason with shapes and their attributes.

The following hands-on activities with manipulatives will help children grasp the geometry concepts presented at second grade. Mathematically proficient second graders accurately use definitions and language to construct viable arguments about mathematics. During discussions about geometry problems, children should be given opportunities to constructively critique strategies and reasoning with their classmates. Teachers will want to ensure there is ample time for children to communicate about shapes and their attributes.