

1.5 Polygons and Circles

In this unit students

- **build and draw shapes based on attributes;**
- **create composite shapes from two- and three-dimensional shapes;**
- **partition circles and rectangles into equal shares.**

This unit has no prerequisites, so could potentially be taught at a different place in the year. We have chosen its placement here to provide an interlude in the major work of the grade, allowing students to process what they have learned in the first four units.

Students learn about attributes that define shapes and ones that do not. For example, triangles are defined as being closed shapes with three straight sides, while color, size, and orientation do not define any shape. Building and drawing shapes based on defining attributes helps students develop abstract representations for everyday objects they encounter in the world. Constructing figures for themselves also helps students to internalize the defining attributes of geometric figures.

Students compose and decompose two- and three-dimensional shapes in preparation for later work in geometric measurement (area and volume). They also partition circles and rectangles into two and four equal shares and develop the mathematical vocabulary that goes with those partitions (halves, fourths, quarters) and begin to understand that partitioning a figure (a whole) into more equal pieces creates smaller pieces. This work lays the foundation for work students will do with telling time in analog clocks in [Unit 1.8](#) and begins to lay the foundation for later work with fractions in grades 3–5.

Comment on this unit [here](#).



[Unit Blueprint: Polygons and Circles](#)

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