



A Pathway to Understanding Area and Perimeter

Guide for Curriculum Unit 19.05.01, published September 2019

by Lianne Aubert Sanfeliz

The concepts of area and perimeter are essential components of the mathematics curriculum in primary grades not only because they can be illustrated by “real-life” situations, such as describing the perimeter of a fence around the playground, or the area covered by the classroom rug, but also because they are closely related to other mathematical concepts like addition and multiplication, surface area, and volume.

However, the typical treatment of these concepts in the mathematics curriculum is confusing and challenging for some students. The introduction of procedures and area formulas before the proper conceptual understanding is developed, the lack of comprehension of the differences between linear and squared units, difficulties to relate multiplication arrays with the area of rectangular figures, and the tendency to believe that rectangular figures with the same perimeter must have the same area and vice-versa are some of the rationales for the misunderstanding of area and perimeter.

In this unit, students will be able to explore what happens to the perimeter and area of a rectangular figure when the rectangle is changed by removing unit squares. They will also compare the areas of rectangles with the same perimeter and vice-versa. The focus of the unit is to deepen students’ understanding of perimeter and area while concluding the relationships and differences between the two concepts. Students will be able to communicate effectively through drawings and numbers, work cooperatively in small groups, and successfully apply their comprehension about area and perimeter in a real-life situation.

(Developed for Mathematics, grade 3; recommended for Mathematics, grade 3)

<https://teachers.yale.edu>

©2023 by the Yale-New Haven Teachers Institute, Yale University, All Rights Reserved. Yale National Initiative®, Yale-New Haven Teachers Institute®, On Common Ground®, and League of Teachers Institutes® are registered trademarks of Yale University.

For terms of use visit https://teachers.yale.edu/terms_of_use