



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative

2019 Volume V: Perimeter, Area, Volume, and All That: A Study of Measurement

Measures and Counts and Shapes, Oh...Polyomino?

Guide for Curriculum Unit 19.05.08, published September 2019

by Joseph Parrett

This is a kindergarten unit that will connect the mathematical strands of geometry, counting and cardinality, and measurement and data, through the use of the shapes known as polyominoes. The students will engage in hands-on activities to find, create, and record polyominoes. They will use these shapes to practice critical skills from the Common Core State Standards in Mathematics, including counting and writing numerals and the description of geometric attributes. They will then engage in measurement tasks that culminate in finding area and perimeter of polyominoes. The unique nature of polyominoes makes these advanced measurement practices totally accessible to kindergarten students. In the summative activity, students will engage in critical thinking exercises as they consider the polyominoes. They will sort the shapes into groups, and justify their groupings by referring to data collected about the attributes of the polyominoes. These activities will also strengthen student skills associated with multiple CCSS Math Practices. This unit will expose primary students to advanced learning, concepts and vocabulary, and at the same time they will be practicing critical kindergarten standards from across three mathematical strands.

(Developed for Mathematics, grade K; recommended for Mathematics, grades 1-2)

<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