



Curriculum Units by Fellows of the National Initiative

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

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## **Pentomino Garden: An Explorative Unit in Measurement, Manipulatives, and Gardening**

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by Jamie A. Griffin

This curricular unit focuses on measurement and will be taught after students have learned how to measure using non-standardized units. It reiterates the concepts learned while using non-standard units to measure such as the units must be edge to edge, not have gaps, and not overlap. The special emphasis of the unit is the relationship between geometry, measurement, and arithmetic. The main math concepts that will be focused on in this unit are the appropriate use of a ruler, the array structure of a rectangle, perimeter, and area of simple shapes such as squares and rectangles. This unit explores ways that students can interact with measurement through counting and various other strategies. By using specific, real-world applications of the math concepts students will realize the relevance of mathematics in their lives and how it exists all around them. The use of manipulatives, gardening, and math talks are critical for this unit. These strategies will bring the mathematics to life and engage the students in a new way. By creating different aspects of a garden through measurement students will see how measurement is related to arithmetic and geometry as well as related to their own lives. Furthermore, the measurement that takes place with a ruler in our garden demonstrates the importance of using standardized units even in primary grades.

(Developed for Measurement and Geometry, grade 1)

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