

Grade 5

As PA transitions to the PA Core Standards, the focus of GRADE 5 instruction needs to shift:

Less emphasis on:	More emphasis on:
	<u>Standards for Mathematical Practice</u> • Describe mathematical “habits of mind” • Standards for mathematical proficiency: reasoning, problem solving, modeling, decision making, and engagement • Connect with content standards in each grade
<u>Numbers and Operations</u> • Developing understanding integers, fractions, or percents • Developing understandings of equality as it relates to specific properties (e.g. Distributive) • Using various strategies, including use of concrete objects, to solve equations and inequalities • Recognizing, describing, creating, and extending patterns and forming a rule for patterns • Determining a functional rule from a table or graph • Understanding number theory concepts (e.g. primes, factors, multiples, composites) • Limited computation with fractions • Rounding and estimation in operations	<u>Numbers and Operations</u> • Developing a depth of understanding of the place value system in working with base ten numbers to the thousandths (CC.2.1.5.B.1) • Developing understanding of patterns in the number of zeros in numbers when multiplying or dividing by powers of ten (CC.2.1.5.B.1) • Writing and interpreting numerical expressions including use of parentheses, brackets, or braces (CC.2.2.5.A.1) • Writing and interpreting simple expressions without evaluating them, understanding relative comparisons of expressions (CC.2.2.5.A.1) • Generating two numerical patterns given two different rules, identifying relationships between corresponding terms, and graphing the ordered pairs (CC.2.2.5.A.4) • Multiplying multi-digit numbers with decimals through hundredths (CC.2.1.5.B.2) • Demonstrating depth of understanding of all operations involving multi-digit numbers with decimals through use of concrete models/drawings, understanding of place value, properties, and relationships (CC.2.1.5.C.1) • Demonstrating depth of understanding of all fraction operations and real-world applications of those operations based on the relationships between the operations (CC.2.1.5.C.2)

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<u>Measurement</u> - Selecting and using appropriate instruments and units for measuring quantities to a specified level of accuracy - Estimating areas and volumes of shapes and solids as the sums of areas of tiles and volumes of cubes	<u>Measurement</u> Converting within a given measurement system (customary and metric) and solving multi-step real world problems (CC.2.4.5.A.1)
<u>Geometry</u> - Three-dimensional shapes - Predicting and describing the result of a translation (slide), rotation (turn), or reflection (flip) of a 2- dimensional shape	<u>Geometry</u> Developing depth of understanding of the classification of two-dimensional figures based on their properties (CC.2.3.5.A.2)
<u>Data Analysis and Probability</u> - Gathering and displaying data based on surveys and observations - Calculating, describing, and analyzing measures of central tendency - Developing conceptual understandings of probabilities and predictions, combinations and outcomes - Determining a functional rule from a table or graph - Using concrete objects and combinations of symbols and numbers to create expressions, equations, and inequalities that model mathematical situations	<u>Data Analysis and Probability</u> - Graphing to display data resulting from measurement (e.g. creation a line plot) (CC.2.4.5.A.2) - Analyzing and solving problems based on data presented in graphs (line plots) using grade-appropriate fraction operations (CC.2.4.5.A.4)

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