pennsylvania
DEPARTMENT OF EDUCATION

SAS Standards Aligned System

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:
	Standards for Mathematical Practice • Describe mathematical "habits of mind" • Standards for mathematical proficiency: reasoning, problem solving, modeling, decision making, and engagement • Connect with content standards in each grade
Numbers and Operations • 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	**Numbers and Operations** • Developing a depth of understanding of the place value system in working with base ten numbers to the thousandths. • Developing understanding of patterns in the number of zeros in numbers when multiplying or dividing by powers of ten. • Writing and interpreting numerical expressions including use of parentheses, brackets, or braces. • Writing and interpreting simple expressions without evaluating them, understanding relative comparisons of expressions. • Generating two numerical patterns given two different rules, identifying relationships between corresponding terms, and graphing the ordered pairs. • Multiplying multi-digit numbers with decimals through hundredths. • 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. • Demonstrating depth of understanding of all fraction operations and real-world applications of those operations based on the relationships between the operations.

The purpose of this document is to provide a summary of changes in emphasis as Pennsylvania transitions from the PA Academic Standards to the PA Core Standards. This is not intended to be a curriculum guide or is it inclusive of all grade levels standards - only to identify shifts in emphasis of instruction.

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Less emphasis on:	More emphasis on:
Measurement • 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.	**Measurement** • Converting within a given measurement system (customary and metric) and solving multi-step real world problems.
Geometry • Three-dimensional shapes • Predicting and describing the result of a translation (slide), rotation (turn), or reflection (flip) of a 2- dimensional shape.	**Geometry** • Developing depth of understanding of the classification of two-dimensional figures based on their properties
Data Analysis and Probability • 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.	**Data Analysis and Probability** • Graphing to display data resulting from measurement (e.g. creation a line plot). • Analyzing and solving problems based on data presented in graphs (line plots) using grade-appropriate fraction operations.

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