Course Overview

Middle School | 5 | Math - *Last Updated on October 28, 2024*

DESCRIPTION

K-12 Content Area | Mission & Philosophy Statement

- With confidence and perseverance, young people can tackle complex and novel mathematical challenges, becoming skilled problem solvers who take ownership over their learning process.
- Young people possess the ability to reason mathematically, make conjectures, solve problems and build understanding through effective dialogue and collaboration.
- Learners exhibit critical inquiry through the deliberate asking of questions and the integration of conceptual understanding, reasoning abilities, and procedural fluency.
- Strategically selecting materials, technology, and other resources support mathematical learning and aid in achieving mathematical goals.

Course Description

The PA Core 5 curriculum is a comprehensive framework designed to equip students with a deep understanding and proficiency in mathematics, segmented into four critical focus areas: numbers and operations, algebraic concepts, geometry and measurement, and data and probability. Each area is carefully structured to build upon students' existing knowledge, while also introducing new concepts and skills that are essential for academic success and real-world problem-solving.

In the realm of numbers and operations, the curriculum emphasizes the importance of place-value concepts, not only as the foundation for understanding operations and rounding but also in their application to both whole numbers and decimals. Students are guided to extend their mastery of operations with whole numbers to include decimals, fostering a more nuanced understanding of mathematical procedures. The curriculum also delves into the concept of equivalency, enabling students to add and subtract fractions with confidence. Furthermore, it challenges students to apply and extend their prior knowledge of multiplication and division into the realm of fractions, thereby broadening their computational skills and mathematical comprehension. The exploration of algebraic concepts introduces students to the interpretation and evaluation of numerical expressions. This focus area encourages a deeper analytical approach to understanding mathematics, prompting students to investigate patterns and relationships between numbers. Such analytical skills are pivotal in developing the ability to tackle complex problems and understand mathematical structures. Geometry instruction within the PA Core 5 curriculum centers on practical applications and theoretical understanding. Students learn to graph points in the first quadrant on the coordinate plane, gaining skills that are vital for interpreting real-world and mathematical problems. This focus area also explores the concepts of volume, teaching students to apply these ideas in problem-solving contexts. The curriculum makes explicit connections between volume, multiplication, and addition, enhancing students' ability to reason spatially and numerically. In addressing measurement, data, and probability, the curriculum equips students with the tools to solve problems using conversions within a given measurement system. It also trains students in the representation and interpretation of data, emphasizing the use of appropriate scales. This focus area is designed to develop students' statistical reasoning, preparing them to analyze, interpret, and present data effectively.

STANDARDS

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Pennsylvania Common Core - Grade 5 - Mathematics					
CC.2.1.5.B.1	CC.2.1.5.B.2	CC.2.1.5.C.1	CC.2.1.5.C.2	CC.2.2.5.A.1	CC.2.2.5.A.4
CC.2.3.5.A.1	CC.2.3.5.A.2	CC.2.4.5.A.1	CC.2.4.5.A.2	CC.2.4.5.A.4	CC.2.4.5.A.5

COURSE OBJECTIVES

Specific objectives for this course are aligned to the Pennsylvania Core Standards for Mathematics and the Common Core State Standards for Mathematics as outlined in the Scope and Sequence for Grade 5 Mathematics.

ASSESSMENT TYPES

- Diagnostic Assessments
- Formative Assessments
- Progress Monitoring
- Summative Assessments

SUGGESTED METHODS OF INSTRUCTION

Below is a list of suggested strategies for high-quality instruction in Mathematics:

- Instructional components outlined in the Framework for Teaching by Charlotte Danielson
- Collaborative Learning
- Differentiation
- Direct and Guided Instruction
- Hands-on Learning
- Independent Practice
- Math Language Development Routines
- Problem-solving and Critical Thinking Tasks
- Real-World Applications
- Sense-Making Routines
- Use of Technology
- Visual Representations

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RESOURCES

District Approved Program Resources	District Approved Supplemental Resources	District Approved Technology Resources
McGraw-Hill Reveal Math. (2025) • Teacher Edition Grade 5: Volume 1 (Print & Digital) • Teacher Edition Grade 5: Volume 2 (Print & Digital) • Student Edition Grade 5: Volume 1 (Print & Digital) • Student Edition Grade 5: Volume 2 (Print & Digital)	• McGraw Hill, ALEKS (2025) • IXL Math (2025)	