Pre-Algebra Prep (Fifth-Grade Math) Curriculum

The Pre-Algebra Prep (5th-grade Math) curriculum is based on common core standards and references the Virginia SOLs. It utilizes several resources, including but not limited to *Fifth-Grade Simplified Math, Spiraling Math Review, Prodigy, Frax*, and *Reflex*. Pre-Algebra Prep's objectives are developing whole-number, fraction, and decimal arithmetic fluency, along with reasoning, multi-step problem solving, and other skills to help students complete Pre-Algebra in later years. The following skills are covered in Pre-Algebra Prep:

- Place value:
    - Writing numbers in words
    - Writing numbers in expanded form
    - Comparing numbers using <, >, =
    - Rounding
    - Moving whole numbers and decimals by powers of ten
- Decimal arithmetic:
    - Comparing and ordering decimals
    - Rounding decimals
    - Adding and subtracting decimals
    - Single, double, and then multi-digit multiplication and division with whole numbers and decimals
- Fraction arithmetic:
    - Equivalent fractions
    - Comparing fractions and mixed numbers
    - Converting mixed numbers into improper fractions and vice versa
    - Adding and subtracting fractions with like and unlike denominators
    - Adding and subtracting mixed numbers with like and unlike denominators
    - Interpreting fractions as division problems
    - Multiplying fractions
    - Dividing fractions
    - Convert fractions to decimals and decimals to fractions
- Unit conversion and measurement
    - Introduction to metric and customary unit conversions
    - Measuring using different units
    - Solving word problems that require unit conversions
    - Representing data with units on a line plot
- Volume
    - Introduction to diagramming and calculating the volume of rectangular prisms
    - Diagramming and calculating the volume of complex figures made of several rectangular prisms
- Introduction to coordinate planes
    - Locating points and graphing on a coordinate plane using ordered pairs
    - Extending number patterns of liner functions using coordinate planes
    - Analyzing the relationship between two sets of numbers using a function table

    - Using coordinate planes to solve word problems
- Multi-step problem-solving and logic
    - Introduction to the order of operations and using parentheses or brackets to solve multi-step problems
    - Introduction to exponents
    - Practice solving word problems
    - Using estimation and math logic to test if an answer is reasonable
    - Using models and illustrations to visualize and solve complex word problems