

WELCOME TO FIFTH GRADE MATH!

By the end of the year, here is what students should be able to do:



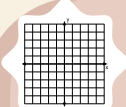
Operations and Algebraic Thinking

- ✓ **Numerical Expressions:** Use parentheses, brackets, or braces in numerical expressions and evaluate them using the order of operations (e.g., “add 8 and 7, then multiply by 2” can be written as $2 \times (8 + 7)$). Create an expression to model a situation.
- ✓ **Patterns and Relationships:** Generate two numerical patterns using two given rules (e.g., “Add 3” and “Add 6”) and identify the relationship between the two patterns.

Base Ten System



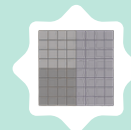
- ✓ **The Power of 10:** Understand that in a multi-digit number, a digit in any place represents $1/10$ of what it represents in the place to its left and 10 times what it represents to its right. Use whole-number exponents to denote powers of 10. (e.g. $4 \times 10^2 = 400$, or $0.05 \div 10^3 = 0.00005$)
- ✓ **Decimals to Thousandths:** Read, write, and compare decimals to the thousandths place (0.001). Round decimals to any place.
- ✓ **Fluency:** Multiply multi-digit whole numbers. Divide up to four-digit dividends by two-digit divisors.
- ✓ **Decimal Operations:** Add, subtract, multiply, and divide decimals to hundredths.



Geometry

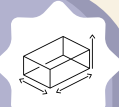
- ✓ **The Coordinate Plane:** Understand the structure of the coordinate system (the x-axis, y-axis, and origin). Graph points in the first quadrant of the coordinate plane.
- ✓ **Classifying 2D Figures:** Classify two-dimensional figures in a hierarchy based on properties. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category (e.g., a rectangle can be classified as a parallelogram, as a quadrilateral, and as a polygon).

Fractions and Decimals



- ✓ **Unlike Denominators:** Add and subtract fractions with different denominators (including mixed numbers).
- ✓ **Word Problems:** Solve word problems involving addition, subtraction, multiplication, and division of fractions.
- ✓ **Fraction Multiplication:** Multiply a fraction or whole number by a fraction. Find the area of a rectangle with fractional side lengths. Explain why multiplying a number by a fraction greater than 1 results in a product greater than the number and why multiplying a number by a fraction less than 1 results in a product smaller than the number.
- ✓ **Fraction Division:** Divide fractions by whole numbers and whole numbers by fractions.

Measurement and Data



- ✓ **Unit Conversions:** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m) and use these conversions in solving multi-step, real-world problems.
- ✓ **Representing Data:** Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$). Use operations on fractions to solve problems based on the line plot. Display and interpret data shown in tallies, tables, charts, pictographs, bar graphs, and line graphs, and use a title, appropriate scale, and labels.
- ✓ **Understanding Volume:** Find the volume of one or more rectangular prisms.

