

Instructional Vocabulary

Grade 5 Math

Unit 1: Place Value

- **Base-ten system** – a number system based on multiples of 10, where each digit has ten times the value of the same digit one place to its right
- **Decimal** – another name for a decimal fraction, which is a fractional number with a denominator of ten or a power of ten
- **Period** – a three-digit group of whole numbers separated by commas where each grouping consists of units, tens, and hundreds
- **Place value** – the value of a digit as determined by its position in a number, such as units, tens, hundreds, etc.

Unit 2: Addition and Subtraction with Whole Numbers and Decimals

- **None Identified**

Unit 3: Multiplication and Division

- **Area model** – a rectangular grid formed from square units
- **Partial product** – computed by multiplying the value of each digit in one factor by the value of each digit in the other factor

Unit 4: All Operations

- **Multi-step equation** – an equation that requires two or more steps and/or operations to solve
- **Problem-solving model** – a flexible framework to think about the processes involved in mathematics (e.g., Polya's stages: understanding the problem, making a plan, carrying out the plan, and looking back; etc.)
- **Problem-solving strategy** – a plan or strategy to solve word problems (e.g., acting it out, drawing a picture or graph, using logical reasoning, looking for a pattern, using a process of elimination, creating an organized chart or list, solving a simpler but related problem, using trial and error (systematic guessing and checking), working backwards, etc.)

Unit 5: Patterns and Relationships

- **Equation** – a statement showing the equality of two expressions joined by an equal sign
- **Expression** – a mathematical phrase that can contain ordinary numbers, unknowns (such as x or y) and operators (such as add, subtract, multiply and/or divide)
- **Input/output machine or table** – takes a number called the *input* and performs one or more operations on it to produce a new value called the *output*

Unit 6: Factors and Primes

- **Common factor(s)** – a factor or set of factors shared by two or more numbers
- **Composite number** – a number with more than two factors

- **Divisibility** – the ability for a number to be divided without a remainder
- **Factor** – a number multiplied by another number to find a product
- **Prime number** – a number with exactly two factors, 1 and the number itself

Unit 7: Fractions

- **Equivalent fractions** – fractions that represent the same value
- **Fraction** – a number in the form $\frac{a}{b}$ or a/b where a and b are whole numbers and b is not zero. A fraction can be used to name part of an object, part of a set of objects, to compare two quantities, or to represent division
- **Improper fraction** – a fraction with a numerator that is greater than or equal to the denominator and whose value is equal to or greater than one
- **Mixed number** – a number that has a whole number part and a fractional part

Unit 8: Probability

- **Arrangement** – a selection of items in which order is important
- **Combination** – a selection of items in which order does not matter
- **Equally likely** – all possible outcomes have the same probability of occurring
- **Fundamental Counting Principle** – an algebraic method to determine the number of all possible outcomes in a sample space by multiplying the number of ways each event can occur
- **Outcome** – the result of an action or event
- **Possible outcome** – the possible result of an experiment
- **Prediction** – a statement about an event in the future based on an experiment or an experience
- **Probability** – the number of favorable outcomes divided by the number of possible outcomes
- **Random event** – an event that does not have a determined outcome
- **Sample space** – the set of all possible outcomes of an experiment
- **Tree diagram** – a diagram used to organize outcomes of an experiment (in levels by event)

Unit 9: Measurement

- **Customary measurement** – the system of measurement used in the United States usually written with fractions or mixed numbers
- **Metric measurement** – the system of international measure (SI) based on the decimal systems and base units of tens
- **Standard unit** – a unit of measure that has been defined by a recognized authority, such as a government or standards organization. For example, *inches, meters, seconds, liters, pounds, and grams* are all standard units

Unit 10: Geometry

- **Attribute** – a characteristic that helps define a figure
- **Congruent** – two figures that are exactly the same size and same shape
- **Intersecting lines** – lines that meet or cross each other
- **One-dimensional figure** – a figure, such as a line or the side of a two-dimensional figure, that has one basic unit of measurement – length

- **Parallel lines** – lines that lie in the same plane, never intersect, and are the same distance apart
- **Perpendicular lines** – lines that intersect at right angles to each other to form square corners
- **Reflection** – a flip of a figure over a line to make a mirror image of that figure
- **Rotation** – a turn of a figure that moves the figure around a point
- **Three-dimensional figure** – a figure that has three basic units of measurement (usually length, width, and height/depth)
- **Transformation** – a change of position of a geometric figure
- **Translation** – a slide that moves a figure horizontally, vertically, or diagonally from one location to another along a straight line
- **Two-dimensional figure** – a figure that has two basic units of measurement (usually length and width)

Unit 11: Statistics

- **Coordinate system** – a method of locating points on a plane or in space by means of numbers
- **Data** – numbers or information that are/is collected from a survey or experiment
- **Median** – the middle number of a set of data that has been arranged in order from greatest to least or least to greatest
- **Mode** – the most frequent piece of data in the set
- **Range** – the difference between the greatest number and least number in a set of data

Unit 12: Tying it all Up

- **Problem-solving model** – a flexible framework to think about the processes involved in mathematics (e.g., Poyla's stages: understanding the problem, making a plan, carrying out the plan, and looking back; etc.)
- **Problem-solving strategy** – a plan or strategy to solve word problems (e.g., acting it out, drawing a picture or graph, using logical reasoning, looking for a pattern, using a process of elimination, creating an organized chart or list, solving a simpler but related problem, using trial and error (systematic guessing and checking), working backwards, etc.)

Unit 13: Fraction Connections

- **Equivalent fractions** – fractions that represent the same value
- **Fraction** – a number in the form $\frac{a}{b}$, where a and b are whole numbers, and b is not zero. A fraction can be used to name part of an object or part of a set of objects; to compare two quantities; or to represent division.
- **Improper fraction** – a fraction with a numerator that is greater than or equal to the denominator and whose value is equal to or greater than one
- **Mixed number** – a number that has a whole number part and a fractional part

Unit 14: Measurement Connections

- **Customary measurement** – the system of measurement used in the United States; usually written with fractions or mixed number
- **Metric measurement** – the system of international measure (SI) based on the decimal systems and base units of tens

- **Standard unit** – a unit of measure that has been defined by a recognized authority, such as a government or standards organization; for example, *inches, meters, seconds, liters, pounds, and grams* are all standard units