 Essential Math Standards 3rd Grade

Dear Families,

Essential Standards are the grade level standards that our teachers have identified as the most critical for our students to learn before moving to the next grade level. This year we are focusing on our essential math standards, making sure that as many students as possible demonstrate mastery of these essentials. Please see below for a list of our math essential standards for your child’s grade level. Please let us know if you have questions!

Mansfield Elementary 3-5 Teachers

**3rd Grade Math Essential Standards**

Numerical Reasoning:

**3.NR.1.1** Read and write multi-digit whole numbers up to 10,000 using base-ten numerals and expanded form.

**3.NR.1.2** Use place value reasoning to compare multi-digit numbers up to 10,000, using >, =, and < symbols to record the results of comparisons.

**3.NR.4.1** Describe a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction. Use parts of a whole, parts of a set, points on a number line, distances on a number line and area models.

**3.NR.4.4** Recognize and generate simple equivalent fractions.

Patterns and Algebraic Reasoning:

**3.PAR.2.1** Fluently add and subtract within 1000 to solve problems.

**3.PAR.3.2** Represent single digit multiplication and division facts using a variety of strategies. Explain the relationship between multiplication and division.

**3.PAR.3.3** Apply properties of operations (i.e., commutative property, associative property, distributive property) to multiply and divide within 100.

**3.PAR.3.5** Use place value reasoning and properties of operations to multiply one-digit whole numbers by multiples of 10, in the range 10-90.

Measurement and Data Reasoning:

**3.MDR.5.3** Solve meaningful problems involving elapsed time, including intervals of time to the hour, half hour, and quarter hour where the times presented are only on the hour, half hour, or quarter hour within a.m. or p.m. only.

Geometric and Spatial Reasoning:

**3.GSR.7.3** Discover and explain how area can be found by multiplying the dimensions of a rectangle.

Essential Math Standards 4th Grade

Dear Families,

Essential Standards are the grade level standards that our teachers have identified as the most critical for our students to learn before moving to the next grade level. This year we are focusing on our essential math standards, making sure that as many students as possible demonstrate mastery of these essentials. Please see below for a list of our math essential standards for your child’s grade level. Please let us know if you have questions!

Mansfield Elementary 3-5 Teachers

**4th Grade Math Essential Standards**

Numerical Reasoning:

**4.NR.1.1** Read and write multi-digit whole numbers to the hundred-thousands place using base-ten numerals

and expanded form.

**4.NR.1.4** Use place value understanding to round multi-digit whole numbers.

**4.NR.2.1** Fluently add and subtract multi-digit numbers to solve practical, mathematical problems using place value understanding, properties of operations, and relationships between operations.

**4.NR.2.3** Solve relevant problems involving multiplication of a number with up to four digits by a 1-digit whole number or involving multiplication of two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

**4.NR.2.4** Solve authentic division problems involving up to 4-digit dividends and 1-digit divisors (including whole number quotients with remainders) using strategies based on place-value understanding, properties of

operations, and the relationships between operations.

**4.NR.4.1** Using concrete materials, drawings, and number lines, demonstrate and explain the relationship between equivalent fractions, including fractions greater than one, and explain the identity property of multiplication as it relates to equivalent fractions. Generate equivalent fractions using these relationships.

**4.NR.4.2** Compare two fractions with the same numerator or the same denominator by reasoning about their size and recognize that comparisons are valid only when the two fractions refer to the same whole.

**4.NR.4.6** Add and subtract fractions and mixed numbers with like denominators using a variety of tools.

Patterns and Algebraic Reasoning:

**4.PAR.3.4** Identify composite numbers and prime numbers and explain the relationship with the factor pairs.

Measurement and Data Reasoning:

**4.MDR.6.1** Use the four operations to solve problems involving elapsed time to the nearest minute, intervals of time, metric measurements of liquid volumes, lengths, distances, and masses of objects, including problems involving fractions with like denominators, and also problems that require expressing measurements given in a larger unit in terms of a smaller unit, and expressing a smaller unit in terms of a larger unit based on the idea of equivalence.

Geometric and Spatial Reasoning:

**4.GSR.7.1** Recognize angles as geometric shapes formed when two rays share a common endpoint. Draw right, acute, and obtuse angles based on the relationship of the angle measure to 90 degrees.

**4.GSR.8.1** Explore, investigate, and draw points, lines, line segments, rays, angles (right, acute, obtuse), perpendicular lines, parallel lines, and lines of symmetry. Identify these in two dimensional figures.

Essential Math Standards 5th Grade

Dear Families,

Essential Standards are the grade level standards that our teachers have identified as the most critical for our students to learn before moving to the next grade level. This year we are focusing on our essential math standards, making sure that as many students as possible demonstrate mastery of these essentials. Please see below for a list of our math essential standards for your child’s grade level. Please let us know if you have questions!

Mansfield Elementary 3-5 Teachers

**5th Grade Math Essential Standards**

Numerical Reasoning:

**5.NR.1.1** Explain that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

**5.NR.2.1** Fluently multiply multi-digit (up to 3- digit by 2-digit) whole numbers to solve authentic problems.

**5.NR.2.2** Fluently divide multi-digit whole numbers (up to 4-digit dividends and 2-digit divisors no greater than 25) to solve practical problems.

**5.NR.3.2** Compare and order up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies.

**5.NR.4.1** Read and write decimal numbers to the thousandths place using base ten numerals written in standard form and expanded form.

**5.NR.4.3** Use place value understanding to round decimal numbers to the hundredths place.

**5.NR.4.4** Solve problems involving addition and subtraction of decimal numbers to the hundredths place using a variety of strategies.

**5.NR.5.1** Write, interpret, and evaluate simple numerical expressions involving whole numbers with or without grouping symbols to represent actual situations.

Patterns and Algebraic Reasoning:

**5.PAR.6.2** Represent problems by plotting ordered pairs and explain coordinate values of points in the first quadrant of the coordinate plane.

Measurement and Data Reasoning:

**5.MDR.7.4** Convert among units within relative sizes of measurement units within the customary measurement system.

Geometric and Spatial Reasoning:

**5.GSR.8.4** Discover and explain how the volume of a right rectangular prism can be found by multiplying the area of the base times the height to solve authentic, mathematical problems.