

BELLEFONTE AREA SCHOOL DISTRICT
GRADE 3 FIRST MARKING PERIOD MATHEMATICS LEARNING OBJECTIVES

2.1 Numbers, Number Systems and Number Relationships

By the end of the first marking period, third grade students should be able to:

- 1. Demonstrate an understanding of the use of numbers by:**
 - Reading and writing whole numbers up to 10,000.
 - Identifying places in numbers and the values of digits in those places.
- 2. Demonstrate an understanding of ways to represent numbers by:**
 - Using numerical expressions involving one or more of the basic four arithmetic operations to give equivalent names for whole numbers.
- 3. Demonstrate an understanding of number relationships by:** (not assessed during first marking period)

2.2 Computation and Estimation

By the end of the first marking period, third grade students should be able to:

- 1. Compute accurately by:**
 - Demonstrating automaticity with all addition and subtraction facts through $10 + 10$.
 - Using basic facts to compute fact extensions such as $80 + 70$.
 - Using manipulatives, mental arithmetic, paper-and-pencil algorithms, and calculators to solve problems involving the addition and subtraction of whole numbers; describing the strategies used and explaining how they work.
- 2. Make reasonable estimates by:** (not assessed during first marking period)
- 3. Demonstrate an understanding of the meanings of operations by:**
 - Recognizing and describing change, comparison, and parts-and-total situations.

2.3 Measurement and Estimation

By the end of the first marking period, third grade students should be able to:

- 1. Measure accurately by:**
 - Measuring length to the nearest inch and centimeter.
 - Counting unit squares to find the areas of rectangles.
- 2. Use reference frames (i.e. clocks, thermometers) by:**
 - Telling and showing time to the nearest five minutes on an analog clock.
 - Telling and writing time in digital notation.

2.6 Statistics and Data Analysis & 2.7 Probability and Predictions

By the end of the first marking period, third grade students should be able to:

- 1. Select and create graphs using data by:** (not assessed during first marking period)
- 2. Analyze and interpret data by:** (not assessed during first marking period)
- 3. Demonstrate an understanding of probability by:** (not assessed during first marking period)

2.8 Algebra and Functions, 2.10 Trigonometry, & 2.11 Calculus

By the end of the first marking period, third grade students should be able to:

- 1. Demonstrate an understanding of patterns and functions by:**
 - Extending, describing and creating numeric patterns.
 - Describing rules for patterns and using them to solve problems.
 - Using words and symbols to describe and write rules for functions involving addition and subtraction and using those rules to solve problems.
- 2. Use symbols to represent and analyze situations by:**
 - Reading, writing and explaining number sentences using the symbols $+$, $-$, \times , \div , $=$, $>$ and $<$.
 - Solving number sentences; writing expressions and number sentences to model number stories.
 - Applying the Commutative & Associative Properties of Addition.

2.9 Geometry

By the end of the first marking period, third grade students should be able to:

- 1. Demonstrate an understanding of 2- and 3- dimensional shapes by:** (not assessed during first marking period)
- 2. Apply transformations and symmetry by:** (not assessed during first marking period)