

BELLEFONTE AREA SCHOOL DISTRICT
GRADE 4 FIRST MARKING PERIOD MATHEMATICS LEARNING OBJECTIVES

2.1 Numbers, Number Systems and Number Relationships

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

1. **Demonstrate an understanding of the use of numbers by:**
 - Reading and writing whole numbers and decimals.
 - Identifying places in numbers and the values of the digits in those places.
 - Finding factors of numbers.
2. **Demonstrate an understanding of ways to represent numbers:** (Not assessed during first marking period)
3. **Demonstrate an understanding of number relationships:** (Not assessed during first marking period)

2.2 Computation and Estimation

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

1. **Compute accurately by:**
 - Demonstrating automaticity with addition and subtraction facts.
 - Using mental arithmetic and paper-and-pencil algorithms to solve problems involving the addition and subtraction of whole numbers.
 - Demonstrating automaticity with multiplication facts and related division facts.
2. **Make reasonable estimates:** (Not assessed during first marking period)
3. **Demonstrate an understanding of the meanings of operations:** (Not assessed during first marking period)

2.3 Measurement and Estimation

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

1. **Measure accurately:** (Not assessed during first marking period)
2. **Use reference frames correctly (i.e. clocks, thermometers):** (Not assessed during first marking period)

2.6 Statistics and Data Analysis & 2.7 Probability and Predictions

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

1. **Select and create graphs using data by:**
 - Organizing and using existing data to create bar graphs.
2. **Analyze and interpret data by:**
 - Using maximum, minimum, range, median, mode, and graphs to answer questions.
3. **Demonstrate an understanding of probability:** (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, fourth grade students should be able to:

1. **Demonstrate an understanding of patterns and functions:** (Not assessed during first marking period)
2. **Use symbols to represent and analyze situations by:**
 - Using conventional notation to write expressions and number sentences using the four basic operations.
 - Determining whether number sentences are true or false.
 - Solving open number sentences and explaining solutions.

2.9 Geometry

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

1. **Demonstrate an understanding of 2- and 3- dimensional shapes by:**
 - Identifying, drawing, and describing points, intersecting and parallel line segments, lines, and rays.
 - Identifying, drawing, and describing angles (e.g., right, acute, obtuse).
 - Describing, comparing, and classifying plane and solid figures using appropriate geometric terms.
2. **Apply transformations and symmetry:** (Not assessed during first marking period)