

BELLEFONTE AREA SCHOOL DISTRICT
GRADE 1 MATHEMATICS LEARNING OBJECTIVES – Marking Period 3

2.1 Numbers, Number Systems and Number Relationships

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

1. Demonstrate an understanding of the meanings, uses, and representations of numbers by:

- Counting on by 1s, 2s, 5s, and 10s to 90 and back by 1s from any number less than 50.
- Counting collections of objects accurately and reliably.
- Reading, writing, and modeling with manipulatives whole numbers up to 100.
- Using manipulatives to identify and model odd and even numbers.

2. Demonstrate an understanding of ways to represent numbers by:

- Using manipulatives, drawings, tally marks, and numerical expressions involving addition and subtraction of 1- and 2-digit numbers to give equivalent names for numbers up to 60.

3. Demonstrate an understanding of number relationships by:

- Comparing and ordering whole numbers up to 100.

2.2 Computation and Estimation

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

1. Compute accurately by:

- Demonstrating proficiency with $+/- 0$, $+/- 1$, doubles, and sum-equals-ten addition and subtraction facts (i.e. $6 + 4 = 10$ and $10 - 7 = 3$).
- Using manipulatives, number grids, tally marks, mental arithmetic, and calculators to solve problems involving the addition and subtraction of 1-digit whole numbers with 1- or 2-digit whole numbers.

2. Make reasonable estimates (not assessed during third marking period)

3. Demonstrate an understanding of the meanings of operations by:

- Identifying change-to-more, change-to-less, comparison, and parts-and-total situations.

2.3 Measurement and Estimation

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

1. Demonstrate an understanding of measurement/Measure accurately by:

- Measuring length with standard measuring tools.
- Knowing and comparing the value of pennies, nickels, and dimes; making exchanges between coins.

2. Demonstrate an understanding of reference frames/Use reference frames (i.e. clocks, thermometer) by:

- Reading temperatures on a Fahrenheit Thermometer to the nearest degree.
- Telling and showing time to the nearest half and quarter hour on an analog clock.

2.6 Statistics and Data Analysis & 2.7 Probability and Predictions

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

1. Select and create appropriate graphs of collected or given data (not assessed during the third marking period)

2. Analyze and interpret data by:

- Using graphs to answer simple questions and draw conclusions.

3. Demonstrate an understanding of probability/Apply basic concepts of probability (not assessed during the third marking period)

2.8 Algebra and Functions, 2.10 Trigonometry, & 2.11 Calculus

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

1. Demonstrate an understanding of patterns and functions by:

- Extending, describing and creating numeric, visual, and concrete patterns; solving problems involving “What’s My Rule?” tables, and Frames-and-Arrows diagrams.

2. Use symbols to represent and analyze situations by:

- Reading, writing, and explaining number sentences using the symbols $+$, $-$, and $=$ and the symbols $>$ and $<$.
- Applying the Commutative Property for Addition to basic addition fact problems (i.e. $4 + 6 = 10$ and $6 + 4 = 10$).

2.9 Geometry

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

1. Demonstrate an understanding of the characteristics and properties of two- and three-dimensional shapes by:

- Identifying and describing plane and solid figures including; circles, triangles, squares, rectangles, spheres, cylinders, pyramids, cones, and cubes.

2. Apply transformations and symmetry in geometric situations (not assessed during the third marking period)