EIGHTH GRADE

MATH
CORRELATION GUIDE (SPIs)

FIRST NINE WEEKS

Number and Operations

8.1spi. 1	Identify the opposite and the reciprocal of a rational number.
8.1spi. 2	Compare rational numbers using the appropriate symbol (<, >, =).
8.1spi. 4	Determine the approximate locations of rational numbers on a number line.
8.1spi. 5	Determine the square roots of perfect squares (< 169).
8.1spi. 7	Compute efficiently and accurately with whole numbers, fractions, decimals, and percents.
8.1spi. 8	Use estimation strategies to select a reasonable solution to a real-world problem involving computing with rational numbers.
8.1spi. 10	Use exponential, scientific, and calculator notation to represent large numbers in real-world situations.
8.1spi. 11	Apply order of operations in computing with rational numbers using no more than two parentheses and exponents 1 and 2.

Algebraic Thinking

8.2spi. 2	Evaluate a first-degree algebraic expression given values for two or more variables.
8.2spi. 3	Represent situations and solve real-world problems using symbolic algebra.
8.2spi. 5	Generate equivalent forms for simple algebraic expressions.
8.2spi. 6	Solve one- and two-step linear equations involving integers.
8.2spi. 9	Formulate multi-step equations that represent relationships and real-world situations.
8.2spi. 10	Solve one-step linear inequalities.

Real World Problem Solving

8.1spi. 6	Work flexibly with fractions, decimals, and percents to solve one- and two-step word problems.

SECOND NINE WEEKS

Number and Operations

8.1spi. 3	Use ratios and proportions to represent real-world situations (i.e., scale drawings, probability).

Algebraic Thinking

8.2spi. 1	Generalize a variety of patterns with symbolic rules.
8.2spi. 7	Apply given formulas to solve real-world problems.

Real World Problem Solving

8.1spi. 9	Calculate rates involving cost per unit to determine the best buy.
8.4spi. 5	Solve real-world problems involving rate/time/distance (i.e., d=rt).
8.4spi. 8	Solve problems involving scale factors using ratios and proportions.

Measurement

8.4spi. 1	Select units of appropriate size and type to measure angles, perimeter, area, surface area, and volume.
8.4spi. 2	Covert from one unit to another within the same system.
8.4spi. 3	Estimate length, perimeter, circumference, area, and volume using a variety of strategies.
8.4spi. 4	Apply formulas to find the area of triangles, parallelograms, and trapezoids.
8.4spi. 6	Apply formulas to find the circumference and area of circles.
8.4spi. 7	Estimate or find the area of irregular and complex shapes.
8.4spi. 9	Solve real-world problems using the Pythagorean Theorem (no radicals).

Geometry

8.3spi. 1	Classify types of two- and three- dimensional geometric figures using their defining properties.
8.3spi. 3	Identify relationships among angles (i.e., complementary, supplementary, interior, exterior, vertical, corresponding).
8.3spi. 4	Recognize similar geometric figures.
8.3spi. 5	Determine the measure of an angle of a triangle given the measures of the other two angles.
8.3spi. 6	Apply relationships among angles and side lengths of similar geometric figures.
8.3spi. 9	Solve problems using angle relationships (i.e., complementary, supplementary, interior, exterior, vertical, corresponding).

THIRD NINE WEEKS

Graphs and Graphing

8.2spi. 4	Connect symbolic expressions and graphs of lines.
8.2spi. 8	Interpret graphs which represent rates of change.
8.2spi. 11	Connect the appropriate graphs to a linear equation.
8.3spi. 2	Use ordered pairs to describe given points in a coordinate system.

Real World Problem Solving

8.3spi. 7	Use spatial reasoning and visualization to solve real-world problems.
8.3spi. 8	Apply geometric ideas and relationships in areas outside the mathematics classroom (i.e., art, science, everyday life).

Data Analysis and Probability

8.5spi. 2	Interpret appropriate graphical representations of data (i.e., histograms, box plots, scatterplots).
8.5spi. 4	Connect data sets and their graphical representations (i.e., histograms, stem-and-leaf plots, box plots, scatterplots).

FOURTH NINE WEEKS

Data Analysis and Probability

8.5spi. 1	Identify an appropriate sample to test a given hypothesis.
8.5spi. 3	Determine the mean of a given set of real-world data.
8.5spi. 5	Make conjectures and predictions based on data.
8.5spi. 6	Connect the symbolic representation of a probability to an experiment.
8.5spi. 7	Determine the median of a given set of real-world data (even number of data).
8.5spi. 8	Recognize misleading presentations of data.