Brooke Inselmann

Curriculum Design

**Learner Outcomes**

**Number Sense**

* Students will identify the correct place value by using powers of 10 and writing large numbers in scientific notation.
* Students will identify and explain the meaning of exponents that are negative or zero.
* Students will differentiate between rational and irrational numbers.
* Students will apply the concept of order of operations and properties to simplify numerical expressions.
* Students will explore the meaning and effect of adding, subtracting, multiplying, and diving integers.
* Students will solve problems using concepts of absolute value and square roots.

**Measurement**

* Students will use strategies to explore the correct formula to use when finding the volume, area, or perimeter of a given figure.
* Students will differentiate between surface area and volume by demonstrating that two objects can have different or similar surface area and volumes.
* Students will explore problems involving proportional relationships and scale factors.

**Geometry and Spatial Sense**

* Students will apply the Pythagorean Theorem to solve problems involving right triangles.
* Students will identify the line and rotation symmetries of two-dimensional figures to solve problems.
* Students will perform translations, reflections, rotations, and dilations of two dimensional figures.
* Students will examine three-dimensional geometric objects from different views and draw representations.

**Patterns, Functions and Algebra**

* Students will explain when numerical patterns are linear or nonlinear progressions.
* Students will represent linear equations by plotting points in the coordinate plane.
* Students will represent inequalities on a number line or coordinate plane.
* Students will identify and use correct formulas in problem solving situations.

**Data Analysis and Probability**

* Students will create and interpret box-and-whisker plots, stem-and-leaf plots, and other types of graphs when appropriate.
* Students will analyze a set of data by finding mean, median, mode and range.
* Students will describe how outliers can affect measures.
* Students will make predictions based on theoretical probability.
* Students will compute probabilities of compound events.