

Grand Island Public Schools

7th GRADE MATHEMATICS

As a result of their participation in this course, students will:

Strand 1: Communicating Mathematical Thinking

- Build new mathematical knowledge through problem solving. (Problem Solving)
- Apply and adapt a variety of appropriate strategies to solve problems. (Problem Solving)
- Recognize and use connections among mathematical ideas and/or apply in contexts outside of mathematics. (Connections)
- Investigate, develop, and evaluate mathematical arguments and proofs. (Reasoning and Proof)
- Select, apply, and move fluently among mathematical representations to solve problems. (Representation)

Strand 2: Number and Operations

- Use the multiplicative structure of numbers to understand proportions.
- Compare quantities using ratios, rates, percents or proportions in a variety of contexts.
- Identify the appropriate operations and correctly calculate when solving problems involving integers.
- Perform all operations with integers with and without technology.
- Use scientific notation in a variety of contexts.
- Round numbers larger than 1 million to a given place value.

Strand 3: Algebraic Concepts

- Describe the patterns of change using tables, graphs, and simple symbolic rules.
- Locate and plot points using coordinate pairs in the four quadrants.
- Use numeric, graphic, and symbolic strategies to solve problems.

Strand 4: Geometry, Spatial Concepts, and Measurement

- Use properties of similar figures to determine if two-dimensional figures are similar.
- Use scale factors to solve two-dimensional geometric problems.
- Select the appropriate unit for measuring volume/capacity and weight/mass in standard and metric systems.
- Know the difference between large numbers that are accurate or estimates.

Strand 5: Data Analysis, Probability, and Statistics

- Know the difference between experimental and theoretical probability.
- Find the experimental and theoretical probability in a variety of contexts.
- Use probability as a means for decision making.
- Use a variety of strategies for analyzing probabilities.