6th Grade Mathematics Syllabus
Ms. Rieck

Assignments : All weekly assignments are written on the classroom board. It is expected that students use an assignment notebook to keep track of all assignments.

Mathematics Units of Study:

Prelude: Welcome to *Inspiring Connection*, Course 1!

- No standards assessed.

Chapter 1: Numbers and Data, Shapes and Area, and Expressions

- Ratios and Proportional Relationships, The Number System, Expressions and Equations, Geometry, and Statistics and Probability power standards practiced and assessed.

Chapter 2: Ratio Language, Equivalent Ratios, and Measurement

- Ratios and Proportional Relationships power standards practiced and assessed.

Chapter 3: Measures of Center, Integers, Absolute Value, and Coordinate Planes.

- Statistics and Probability, The Number System, and Geometry power standards practiced and assessed.

Chapter 4: Fractions, Decimals, Percents, and Unit Rates

- Ratios and Proportional Relationships power standards practiced and assessed.

Chapter 5: Variation in Data, Area, and Fractions

- The Number System, Statistics and Probability, and Geometry power standards practiced and assessed.

Chapter 6: Rules of Operations, and Multiples and Factors

- Expressions and Equations, The Number System, and Statistics and Probability power standards practiced and assessed.

Chapter 7: Whole Number, Decimal, and Fraction Division
- The Number System power standards practiced and assessed.

Chapter 8: Algebra Tiles, Expressions, and Equations and Inequalities
- Expressions and Equations power standards practiced and assessed.

Chapter 9: Equations and Inequalities, and Rate
- Ratios and Proportional Relationships, Expressions and Equations, and The Number System power standards practiced and assessed.

Chapter 10: Two Dimensions, Three Dimensions, and Data
- The Number System, Statistics and Probability, and Geometry power standards practiced and assessed.

Chapter 11: Ratios and Proportions, and The Number System
- No standards assessed.

Inspiring Connection: The problem-based nature of each lesson in *Inspiring Connections* provides guided, purposeful investigations that support a deep conceptual understanding of the mathematical objective. The problem set structures students' work so they see how an idea develops, how it is related to other ideas, and why a particular method works. The *Inspiring Connections* courses emphasize reasoning, critical analysis, mathematical modeling, and justification. Students are active participants in their learning.

Mathematical practices play a central role in *Inspiring Connections*. Students do not just learn about mathematics; they do mathematics every day. The lessons have students:

- work in teams to make sense of problems, models, and ideas;
- reason abstractly and quantitatively, often switching between the two as they work through situation-based problems;
- build and refine arguments while they critique the reasoning of themselves and others, first within their teams and then beyond;
- model the world with mathematics as they engage in non-routine tasks;
- use tools, technology, manipulatives, models, and algorithms strategically as they work to solve team-worthy problems;
- attend to precision in their language, calculations, and ideas as they share and refine their thinking verbally and in written form;
- look for and make use of structure as they construct their understanding of tasks and the mathematics behind them; and
- notice, express, and utilize regularity in repeated reasoning.

The *Inspiring Connections* courses contain fewer problems than a typical mathematics textbook, allowing students to concentrate on the mathematics and persevere in solving any given problem. The problems are non-routine (encouraging application and extension), team-worthy (requiring reasoning and collaboration), and engaging (leading to a more positive disposition toward mathematics). In addition, students are asked to report their outcomes in a variety of ways, including diagrams, written content, presentations, and journal entries. Justification of thinking and communication of mathematical arguments are constantly expected.

If you have any further questions, please reach out!
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6th Grade Mathematics Priority Standards:

- **Ratios and Proportional Relationships**
  - 6.M.RP.3 Uses ratio and rate reasoning to solve problems.
- **The Number System**
  - 6.M.NS.2 Fluently divides multi-digit numbers.

    - 6.M.NS.4 Fluently uses four operations on multi-digit decimals.
    - 6.M.NS.7 Use positive and negative numbers to represent quantities.
    - 6.M.NS.9 Orders and finds absolute value of rational numbers.
    - 6.M.NS.11 Graphs points in all four quadrants of the coordinate plane.
- **Expressions and Equations**
    - 6.M.EE.2 Reads, writes, and evaluates expressions that may include variables and exponents.
    - 6.M.EE.7 Write and solve equations with one variable.
- **Geometry**
    - 6.M.G.1 Solve problems using area of complex polygons.
    - 6.M.G.3 Solves problems using volume, including with fractional lengths.
- **Statistics and Probability**
    - 6.M.SP.4 Displays numerical data in plots.
    - 6.M.SP.6 Summarizes numerical data with statistics.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.