

# Mathematics Seventh Grade

## Reasoning proportionally

### Proportional relationships

- representations
- unit rates
- contextualized problems
- percentages

### Rational number expressions and equations

- algorithms with rational numbers
  - contextualized problems
  - properties of operations
  - number lines
  - additive inverses
  - absolute value
  - fraction to decimal form
- equivalent expressions
  - addition, subtraction, factorization and expansion
  - connection to context
- models of quantitative relationships
  - equations and inequalities
  - estimation strategies

### Samples of populations

- probability
  - experimental
  - theoretical
- statistics
  - random sampling
  - comparative inferences

### Two and three dimensional shapes

- geometric figures and relationships
  - scale drawings
  - geometric construction
  - two-dimensional cross-sections
- measurement
  - area and circumference of circle
  - properties of angles
  - contextualized area and volume problems

- KEY:**
- Unifying Theme
  - Organizing Concept
  - Supporting Concept
  - Personal Financial Literacy

- 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 the 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.