

Lake Washington School District  
Teaching and Learning Framework

# Seventh Grade Mathematics

Connected Mathematics Project  
Power Standards | 2009-2010

**7.1 Core Content: Rational numbers and linear equations**

- PS1** Students demonstrate conceptual understanding of addition, subtraction, multiplication and division of positive and negative integers by explaining these procedures using chip models and number lines. 7.1.B
- PS2** Students can fluently and accurately add, subtract, multiply, and divide rational numbers (positive and negative integers, fractions, and decimals). 7.1.C
- PS3** Students can solve two-step linear equations. 7.1.E

**7.2 Core Content: Proportionality and similarity**

- PS4** Students are able to solve proportional relationship problems involving rates and measurement conversions and verify their solutions. 7.2.B, 7.2.I
- PS5** Students are able to identify proportional relationships in similar figures, solve these proportions, and verify their solutions. 7.2.C
- PS6** Students are able to create and connect different representations of proportional relationships (words, tables, graphs, and equations), including writing an equation that corresponds to a given situation. 7.1.F, 7.2.E
- PS7** Students are able to determine and connect rate of change (slope) in tables, graphs, and equations and interpret the rate of change in context. 7.2.F, 7.2.G, 7.2.H

**7.4/8.3/A1.6 Core Contents: Probability and data**

- PS8** Students are able to select, calculate, and justify appropriate measures of center (mean, median, or mode) and variability (minimum, maximum, range, IQR) for a set of data. 7.4.C, 8.3.B
- PS9** Students are able to summarize and compare two data sets using appropriate visual displays (histograms, stem-and-leaf plots, and box-and-whisker plots), measures of center (mean, median, and mode) and variability (maximum, minimum, range, IQR). 7.4.D, 7.4.E, 8.3.A, 8.3.B, A1.6.A
- PS10** Students are able to solve probability problems involving dependent and independent events using the fundamental counting principle, tree diagrams, Venn diagrams, lists, and tables. 7.4.A, 7.4.B, 8.3.F, 8.3.G

**7.6 Core Processes: Reasoning, problem solving, and communication**

- PS11** Students are able to identify relevant information and select a strategy to represent, solve, and verify proportion problems. They answer the problem in context, using appropriate mathematical representations, symbols, and language. 7.6.B, 7.6.C, 7.6.D, 7.6.E

**8.2 Core Content: Properties of geometric figures**

- PS12** Students are able to use angle and line relationships (sum of a triangle's angles is 180, angle relationships for parallel lines cut by a transversal) to find missing angles. 8.2.A, 8.2.B, 8.2.C
- PS13** Students are able to represent and explain the effect of one or more translations, rotations, reflections, or dilations (centered at the origin) of a geometric figure on the coordinate plane. 8.2.D