

Lake Washington School District
Teaching and Learning Framework

Sixth Grade Mathematics

Power Standards | 2009-2010

6.1 Core Content: Multiplication and division of fractions and decimals

- PS1** Students demonstrate conceptual understanding of multiplication and division of non-negative fractions and decimals by explaining their procedures with area models and number lines. 6.1.B
- PS2** Students are able to estimate the products and quotients of non-negative fractions and decimals through the use of benchmarks, place value, and an understanding of the relative effect of multiplying or dividing by different size numbers ($0 < 1$, 1 , and > 1 .) 6.1.C, 6.1.E, 6.1.G
- PS3** Students can fluently and accurately compute with non-negative fractions and decimals. 6.1.D, 6.1.F

6.2 Core Content: Mathematical expressions and equations

- PS4** Students are able to represent simple linear relationships found in situations (or tables) with tables, graphs, and expressions. 6.2.A, 6.2.B
- PS5** Students are able to evaluate linear expressions with variables, non-negative whole numbers, fractions, and decimals through substitution and the use of algebraic properties (associative, commutative, and distributive properties) and the order of operations. 6.2.C, 6.2.D
- PS6** Students are able to solve one-step linear equations and verify their solutions. 6.2.E

6.3 Core Content: Ratios, rates, and percents

- PS7** Students are able solve percent problems and convert between the fractional, decimal, and percent representations of a number. 6.3.A, 6.3.C, 7.2.B

6.3/7.4 Core Contents: Probability

- PS8** Students are able to represent single and two-stage probability experiments (with and without replacement) using tree diagrams and organized lists. 7.4.A
- PS9** Students are able to determine experimental and theoretical probabilities of single and two-stage experiments and use these probabilities to predict the outcomes (experimental probability) of probability experiments. 6.3.F, 6.3.G, 7.4.B

6.4/7.3 Core Contents: Circles, Surface Area and Volume

- PS10** Students understand the relationship between the circumference and diameter of a circle and are able to determine the circumference and area of circles. 6.3.E, 6.4.A
- PS11** Using 2-D nets and formulas students are able to find the surface area and volume for prisms and cylinders and describe how scale factor changes affect these attributes. 6.4.D, 6.4.E, 7.3.A, 7.3.C

6.6 Core Processes: Reasoning, problem solving, and communication

- PS12** Students are able to represent, solve, verify, and communicate solutions to percent, probability, surface area, and volume problems involving non-negative whole numbers, fractions and decimals. 6.1.H, 6.2.F, 6.3.D, 6.6.D, 6.6.E, 7.3.D