Unit 2A – Decimal Operations and Applications

Enduring Understanding

Selection of standard measurement tools and units depends on the real world situation.

Computational estimations produce approximate results.

Multiplication does not always make larger and division does not always make smaller.

Essential Questions

Why are specific units and tools used to measure different attributes?

What determines a reasonable estimation for a given situation?

What is the purpose of estimation?

How do operations with decimals compare to operations with whole numbers?

How can estimation skills and algorithms reinforce one another?

Indicators

3.6.2.1 select tools and units to measure accurately in given situations.

3.6.2.2 compare, convert, and estimate units of measure of length, time, weight, mass, capacity, and volume within the same measurement system.

3.6.2.3 compare relative sizes of both customary and metric units.

6.6.7.1 use estimation and mental math to solve problems with fractions, decimals, and percents, explaining the reasoning involved.

6.6.5.1 add, subtract, multiply, and divide with decimals and fractions, including mixed numbers, expressing answers in simplest form.

Enduring Understanding	**Essential Questions**
Selection of standard measurement tools and units depends on the real world situation. Computational estimations produce approximate results. Fractions, decimals and percents can be used interchangeably.	Why are specific units and tools used to measure different attributes? What determines a reasonable estimation for a given situation? What is the purpose of estimation? What determines an appropriate representation of a number?

Indicators

3.6.2.2 compare, convert, and estimate units of measure of length, time, weight, mass, capacity, and volume within the same measurement system.

3.6.2.3 compare relative sizes of both customary and metric units.

6.6.7.1 use estimation and mental math to solve problems with fractions, decimals, and percents, explaining the reasoning involved.

6.6.7.2 determine equivalent ratios, decimals, and percents.

1.6.3.2 evaluate simple algebraic expressions and simple formulas, including area, perimeter, and distance.

Enduring Understandings	**Essential Questions**
Multiplication does not always make larger and division does not always make smaller. Computational estimations produce approximate results.	How do operations with fractions compare to operations with whole numbers and decimals? What is the purpose of estimation? How can estimation skills and algorithms reinforce one another?

Indicators

6.6.5.1 add, subtract, multiply, and divide with decimals and fractions, including mixed numbers, expressing answers in simplest form.

6.6.7.1 use estimation and mental math to solve problems with fractions, decimals, and percents, explaining the reasoning involved.

Enduring Understandings	**Essential Questions**
Fractions, decimals and percents can be used interchangeably. Computational estimations produce approximate results.	What determines an appropriate representation of a number? What determines a reasonable estimation for a given situation? What is the purpose of estimation?

Indicators

6.6.2.1 compare, order, and describe rational numbers in equivalent forms.

6.6.7.1 use estimation and mental math to solve problems with fractions, decimals, and percents, explaining the reasoning involved.

6.6.7.2 determine equivalent ratios, decimals, and percents.

6.6.7.3 determine ratios, rates, and unit rates in the context of a problem.