



## Number Sense 5-6 Syllabus

### Course Goals

#### 1 Comparing and Ordering

Students compare and order decimals, fractions, percents, scientific notation, and absolute value numbers using the number line as the primary anchor.

#### 2 Build up to the Real Number System

Students learn topics set up in a logical, structured way so they can build up comprehension the Real Number System with the context of prior knowledge.

#### 3 Accelerated Learning

Students in 5th- and 6th-grade are exposed to 8th-grade concepts and critical thinking.

### Course Topics

#### 1 Negative Numbers

Students order, add, subtract, multiply, and divide positive and negative integers using the number line reasoning.

#### 2 Fractions

Students visualize, add, subtract, multiply, and divide fractions.

#### 3 Decimals

Students round, multiply, and divide decimals.

#### 4 Fractions, decimal, and percent (FDP) Conversion

Students learn to convert between fractions, decimals, and percents.

#### 5 Benchmark Fractions

Students use benchmark fractions to order rational numbers on a number line so they can be ordered in ascending or descending order.

#### 6 Absolute Value

Students learn the definition of absolute value and practice evaluating and comparing numbers where it's involved.

#### 7 Powers of Ten & Negative Exponents

Students explore the powers of ten and use it as an introduction to negative exponents.

#### 8 Scientific Notation

Students convert between scientific notation and standard form.

#### 9 Square Roots

Students familiarize themselves with perfect squares up through 400 and their associated square roots. Students also estimate square roots to approximate the location of irrational numbers on a number line.

#### 10 The Real Number System

Students are introduced to the irrational numbers and explore the result of operations on different sets of numbers within the real

number system.

### **11 Proportions**

Students use proportional reasoning to find similar shape unknown sides and the solution to tax, tip, and discount problems.

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