



Arkansas Mathematics Frameworks

Matched to

SkillsTutor & CornerStone Math Level B

Grades 5th – 6th

STRAND: NUMBER SENSE, PROPERTIES, AND OPERATIONS

CONTENT STANDARD 1

The student will communicate an understanding of the properties of numbers and operations (add, subtract, multiply, divide).

NPO.1.1. Identify numerical patterns (e.g., prime numbers, squares, exponents) and verify results (e.g., by continuing the pattern).

Using Whole Numbers:

Using Whole Numbers: Lesson 11: Patterns and Sequences

NPO.1.2. Expand number sense through the use of mental computation, calculators/technology, and written and verbal communication.(e.g., powers of ten, factoring, greatest common factors, least common multiples).

Using Whole Numbers:

Using Whole Numbers: Lesson 7: Compatible Numbers

Using Fractions and Percents:

Using Fractions and Percents: Lesson 1: Equivalent Forms

NPO.1.4. Consistently demonstrate competence with rational number computation (add, subtract, multiply, divide) with and without manipulatives and technology.

Using Whole Numbers:

Using Whole Numbers: Lesson 3: Addition

Using Whole Numbers: Lesson 4: Subtraction

Using Whole Numbers: Lesson 5: Problem-Solving Lesson

Using Whole Numbers: Lesson 6: Multiplication

Using Whole Numbers: Lesson 7: Compatible Numbers

Using Whole Numbers: Lesson 8: Division

Using Whole Numbers: Lesson 9: Problem-Solving Lesson

Using Decimals:

Using Decimals: Lesson 1: Addition of Decimals

Using Decimals: Lesson 2: Subtraction of Decimals

Using Decimals: Lesson 3: Problem-Solving Lesson

Using Decimals: Lesson 4: Multiplication of Decimals

Using Decimals: Lesson 5: Division of Decimals

Using Decimals: Lesson 6: Problem-Solving Lesson

Using Fractions and Percents:

Using Fractions and Percents: Lesson 2: Addition of Fractions
Using Fractions and Percents: Lesson 3: Subtraction of Fractions
Using Fractions and Percents: Lesson 4: Problem-Solving Lesson
Using Fractions and Percents: Lesson 5: Multiplication of Fractions
Using Fractions and Percents: Lesson 6: Division of Fractions
Using Fractions and Percents: Lesson 7: Problem-Solving Lesson
Using Fractions and Percents: Lesson 8: Percent of a Number

NPO.1.5. Communicate knowledge of elementary number theory concepts (e.g., primes, factors, multiples, divisibility rules) through classroom interaction and written responses (e.g., tests, journals).

Using Whole Numbers:

Using Whole Numbers: Lesson 7: Compatible Numbers

Using Fractions and Percents:

Using Fractions and Percents: Lesson 1: Equivalent Forms

CONTENT STANDARD 2

The student will demonstrate and apply knowledge of numbers and numerical relationships to real-world situations.

NPO.2.1. Use estimation to check the reasonableness of computation in application problems.

Using Whole Numbers:

Using Whole Numbers: Lesson 1: Front-End Estimation
Using Whole Numbers: Lesson 2: Estimation by Rounding

NPO.2.2. Develop strategies for comparing quantities using ratios and proportions (e.g., fractions, rates, unit rates, percents, scales) with use of manipulatives and technology.

Using Fractions and Percents:

Using Fractions and Percents: Lesson 1: Equivalent Forms
Using Fractions and Percents: Lesson 2: Addition of Fractions
Using Fractions and Percents: Lesson 3: Subtraction of Fractions
Using Fractions and Percents: Lesson 4: Problem-Solving Lesson
Using Fractions and Percents: Lesson 5: Multiplication of Fractions
Using Fractions and Percents: Lesson 6: Division of Fractions
Using Fractions and Percents: Lesson 7: Problem-Solving Lesson
Using Fractions and Percents: Lesson 8: Percent of a Number

NPO.2.3. Determine the most appropriate notational representation of a number for the given problem (for example fractions vs. decimals, scientific notation).

Understanding Numbers:

Understanding Numbers: Lesson 1: Place Value
Understanding Numbers: Lesson 2: Numbers and Word Names
Understanding Numbers: Lesson 3: Comparing and Ordering Numbers

NPO.2.4. Explain the relationship of numbers in one and two dimensional graphs (e.g., number lines and coordinate graphs), with and without appropriate technology such as graphing calculators.

Understanding Numbers:

Understanding Numbers: Lesson 3: Comparing and Ordering Numbers

STRAND: MEASUREMENT

CONTENT STANDARD 1

The student will use measurement attributes (length, capacity, weight, mass, area, volume, time, money, temperature, scale and angle) to describe and compare mathematical and real-world objects.

M1.1. Use estimation to check the reasonableness of measurements obtained from use of various instruments (including angle measures).

Understanding Numbers:

Understanding Numbers: Lesson 4: Changes in Temperature

Understanding Numbers: Lesson 5: Time Zones

M.1.3. Convert from one measurement to another within the same system (customary or metric)

Understanding Numbers:

Understanding Numbers: Lesson 4: Changes in Temperature

Understanding Numbers: Lesson 5: Time Zones

CONTENT STANDARD 2

The student will demonstrate the appropriate use of measuring instruments.

M.2.1. Select appropriate units and tools (metric, customary and non-standard) to measure to the required degree of accuracy.

Understanding Numbers:

Understanding Numbers: Lesson 4: Changes in Temperature

Understanding Numbers: Lesson 5: Time Zones

STRAND 3: MEASUREMENT

CONTENT STANDARD 3

The student will apply measurement concepts to solve problems inside and outside the field of mathematics.

M.3.1. Develop and use procedures to solve measurement problems using one, two, and three dimensions.

Understanding Numbers:

Understanding Numbers: Lesson 4: Changes in Temperature

STRAND: DATA ANALYSIS, STATISTICS AND PROBABILITY

CONTENT STANDARD 1

The student will perform the steps that comprise data analysis, from gathering information to communicating results.

DSP.1.1. Actively and systematically collect, organize and describe data using technology when appropriate.

Working with Data:

Working with Data: Lesson 1: Bar Graphs

Working with Data: Lesson 2: Graphing Ordered Pairs

Working with Data: Lesson 3: Line Graphs

Working with Data: Lesson 4: Circle Graphs

DSP.1.2. Construct, read and interpret tables, charts and graphs (including stem-and-leaf, histogram, bar graph, pie graph, box and whiskers, line graph, scatter plots) with and without technology.

Working with Data:

Working with Data: Lesson 1: Bar Graphs

Working with Data: Lesson 2: Graphing Ordered Pairs

Working with Data: Lesson 3: Line Graphs

Working with Data: Lesson 4: Circle Graphs

STRAND 5: PATTERNS, ALGEBRA AND FUNCTIONS

CONTENT STANDARD 1

The student will use the language/symbols of algebra to represent patterns and functions.

PAF.1.4. Summarize and pose problems/situations relating to the algebraic relationships, patterns, and functions discovered through explorations.

Using Whole Numbers:

Using Whole Numbers: Lesson 5: Problem-Solving Lesson

Using Whole Numbers: Lesson 9: Problem-Solving Lesson

Using Decimals:

Using Decimals: Lesson 3: Problem-Solving Lesson

Using Decimals: Lesson 6: Problem-Solving Lesson

Using Fractions and Percents:

Using Fractions and Percents: Lesson 4: Problem-Solving Lesson

Using Fractions and Percents: Lesson 7: Problem-Solving Lesson

Content Standard 2

The student will use algebraic concepts to model, to solve, and to test solutions of mathematical and real-world problems.

PAF.2.2. Identify variables and relationships and translate them into mathematical statements or other mathematics representations to construct a model (e.g., converting from graphs, tables, words, and expressions).

Using Whole Numbers:

Using Whole Numbers: Lesson 10: Equations

Using Whole Numbers: Lesson 11: Patterns and Sequences

Using Whole Numbers:

Using Whole Numbers: Lesson 5: Problem-Solving Lesson

Using Whole Numbers: Lesson 9: Problem-Solving Lesson

Using Decimals:

Using Decimals: Lesson 3: Problem-Solving Lesson

Using Decimals: Lesson 6: Problem-Solving Lesson

Using Fractions and Percents:

Using Fractions and Percents: Lesson 4: Problem-Solving Lesson

Using Fractions and Percents: Lesson 7: Problem-Solving Lesson

PAF.2.3. Write and solve equations and inequalities (using manipulatives and technology).

Using Whole Numbers:

Using Whole Numbers: Lesson 10: Equations

Using Whole Numbers: Lesson 11: Patterns and Sequences

Using Whole Numbers:

Using Whole Numbers: Lesson 5: Problem-Solving Lesson

Using Whole Numbers: Lesson 9: Problem-Solving Lesson

Using Decimals:

Using Decimals: Lesson 3: Problem-Solving Lesson

Using Decimals: Lesson 6: Problem-Solving Lesson

Using Fractions and Percents:

Using Fractions and Percents: Lesson 4: Problem-Solving Lesson

Using Fractions and Percents: Lesson 7: Problem-Solving Lesson

PAF.2.4. Communicate in written and verbal form a verification of the solution and the process used to obtain the solution.

Using Whole Numbers:

Using Whole Numbers: Lesson 10: Equations

Using Whole Numbers: Lesson 11: Patterns and Sequences

Using Whole Numbers:

Using Whole Numbers: Lesson 5: Problem-Solving Lesson

Using Whole Numbers: Lesson 9: Problem-Solving Lesson

Using Decimals:

Using Decimals: Lesson 3: Problem-Solving Lesson

Using Decimals: Lesson 6: Problem-Solving Lesson

Using Fractions and Percents:

Using Fractions and Percents: Lesson 4: Problem-Solving Lesson

Using Fractions and Percents: Lesson 7: Problem-Solving Lesson